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Interest Among Master's Degree Students and Graduates in Earning a Doctoral Degree in Leadership

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INTEREST AMONG MASTER'S DEGREE STUDENTS AND GRADUATES IN
EARNING A DOCTORAL DEGREE IN LEADERSHIP

by

Richard W. Houseal, Jr.

Dissertation

Submitted to the Faculty of

Olivet Nazarene University

School of Graduate and Continuing Studies

in Partial Fulfillment of the Requirements for

the Degree of

Doctor of Education

in

Ethical Leadership

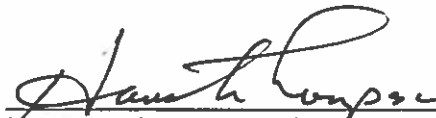
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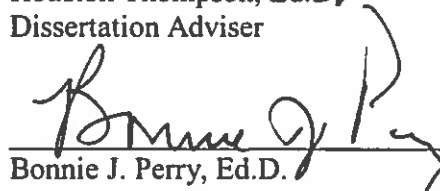
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Dissertation


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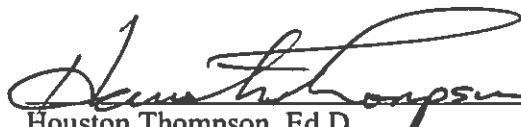
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DEDICATION

To my parents, Richard and Mary Houseal, both of whom went to be with our Lord and Savior during the process of this journey. They provided great love and taught me great lessons by faithfully carrying out the greatest leadership position anyone can have—parenting a family of five children.

ABSTRACT

The number of professional doctorates offered by universities has grown rapidly since the 1990s. Research has shown that professional doctorates offer relevant doctoral education in order to meet the needs of the modern workplace. Universities must understand both the needs of the marketplace and the needs of students, and determine the best use of limited resources for recruiting, in order to offer doctoral programs that meet marketplace and students' needs. To address these issues, this study examined the level of interest that potential doctoral students—those currently in graduate school and those holding a master's degree—had in earning a doctoral degree. Using a large convenience sample ($n=934$) of potential doctoral students affiliated with several institutions, this study discovered that 20% (187) had *no interest* in earning a doctoral degree, while 25% (236) had a *definite* or *very high interest* in earning a doctoral degree. This study further examined the attitudes, program preferences, and motivations potential students had toward earning a doctoral degree. While program costs and financial aid were *extremely important* or *definitely important* considerations for over 90% of those with any interest in earning a doctoral degree, chi-square analyses and multiple regressions found that one's field, age, and various other factors influenced one's level of interest in different types of doctoral degrees. While no one or two variables hold the key to predicting who will pursue a doctoral degree, universities offering a doctoral degree in Leadership should place some resources in forming partnerships with the business community.

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CHAPTER I

INTRODUCTION

John Maxwell, the author of more than 70 books—most of which are about leadership—is well known for saying; “Everything rises and falls on leadership” (The John Maxwell Co., 2016, para. 1). However, leadership is both a complex and a confusing subject (Avery, 2013). It is sometimes described as a set of characteristics one possesses, and at other times explained as the decisions and actions one implements. Leadership has been described in terms of philosophies, theories, frameworks, paradigms and structures. Leadership can be found in large organizations such as the head of a country, or in small units such as the head of a family. One thing about leadership is certain; it is a necessity in every facet of life.

One aspect of leadership that has often gone unnoticed until compromised is ethics. In 2013, Gary Shapiro (2013), President and CEO of the Consumer Electronics Association, wrote an article for the Huffington Post titled *America Faces an Ethics Crisis*. In the article, Shapiro outlines several ethical lapses at various levels of government. For example, he explained that the state of New York overcharged Medicaid by \$15 billion during the past two decades, and that an Inspector General’s report described how some leaders within the Internal Revenue Service targeted conservative groups in order to delay their tax-exempt status because of the political leanings of the groups.

Government is not the only source of unethical behavior. Ethical lapses from leaders in various fields fill the news. In sports, several executives in the Fédération Internationale de Football Association (FIFA) have been indicted for accepting bribes, money laundering and fraud totaling up to \$150,000,000 (Associated Press, 2015). In business, Volkswagen executives have admitted to integrating software in order to cheat emissions testing in 800,000 gas-powered cars and 11,000,000 diesel-powered vehicles throughout the world (Woodyard, 2015). In education, the Chicago public school system's chief executive pleaded guilty to accepting more than \$2,000,000 in bribes and kickbacks from her former employer in exchange for directing \$23,000,000 in public school contracts to the chief executive's former employer (Madhani, 2015). Even religious institutions are not exempt from ethical failures, as the child sex abuse scandals among Catholic priests has made clear, and which sites such as BishopAccountability.org have documented (BishopAccountability.org, 2003).

Although Merriam-Webster defined ethics as, "the discipline dealing with what is good and bad and with moral duty and obligation" ("Ethic," n.d., para. 1), philosophers and scholars have debated the issue for centuries without coming to a common agreement concerning what is ethical and what is not; there is no universal rulebook that one can consult. One might argue that a country or community's laws define what is ethical, but laws vary from place to place, and can even be contradictory. McCoy (2007) wrote, "being ethical requires more than obeying the law...ethics is contextual, although it is contextual around a set of core values" (p. 181).

Because there is no universal common agreement about what is ethical, many employers and organizations have produced their own Code of Ethics in order to create a

common set of core values, at least within their organizations. For example, leaders of the National Association of Social Workers (NASW) have created a Code of Ethics for their members consisting of a set of core values, purpose, and standards. The NASW website also includes a section on the History of the groups' Code of Ethics, which originated in 1960, Ethics Education and Training, Ethics Resources and Literature, and even a section on How to File a Complaint (NASW, 2016). Likewise, the American Psychological Association (APA) has posted a 15-page document titled, "Ethical Principles of Psychologists and Code of Conduct" on its website (APA, 2010), and also provides an Ethics Office to serve as a resource for its members (APA, 2016).

Still, leaders in government, business, sports, education, religion, medicine, law, and every other facet of life are faced with ethical dilemmas every day—specific situations that are not addressed by laws or even a Code of Ethics document. McCoy (2007) wrote that ethical decision-making could fall into three categories: moral uncertainty, moral dilemma, and moral distress. He described moral uncertainty as feeling uncomfortable about a particular behavior, but not knowing whether it is truly unethical. He suggests that having an environment where one can question one's own actions is an important part of being ethically sensitive and necessary for ethical behavior. Moral dilemmas happen when one must choose between two or more morally good choices, or two or more morally bad choices. Moral distress occurs when institutional policies, a lack of time, a lack of resources, or some other reason prevents one from doing what he or she believes right. "Ethics can cause us to wish to do what is required beyond the law, or even against the law" (McCoy, p. 146), such as when one believes a law forces himself or herself into doing something unethical.

So how do leaders learn how to deal with moral uncertainties, dilemmas and distress? For many leaders the answer rests in higher education. For example, after the 2001 bankruptcy of Enron, an energy services company based in Houston, Texas, whose leaders were indicted for accounting fraud, and the dissolution in 2002 of Arthur Anderson, a major accounting firm whose audits allegedly helped conceal Enron's true value, most MBA programs either added courses in ethics or endeavored to infuse ethics throughout their programs (Castiglia & Nunez, 2010). However, Alsop (2006) wondered whether these efforts would continue once the memories of the scandals faded, and he noted the difficulties many MBA programs were having in effectively making ethics an integral part of the curriculum.

Business leaders are not the only type of leaders who need training in ethics. Barry and Ohland (2009) wrote that educators in all professional fields are responsible for preparing university graduates with the skills necessary to tackle ethical dilemmas. Their study specifically looked at the fields of engineering, health, business and law. The researchers found that even though different types of professional training were necessary within each of these fields, the fields had a lot in common when it came to defining, applying, instructing, and assessing professional ethics. They also reported that there had been important advancements in each field's ability to assess students' general moral reasoning.

Statement of the Problem

A number of universities offer either a master's degree or doctor's degree in Leadership. One such university is Olivet Nazarene University (ONU). ONU is a Christian, liberal arts university affiliated with the Church of the Nazarene. Located in

Bourbonnais, Illinois, and founded in 1907, the university offers associate, bachelor, master, and doctor degree programs in 120 areas of study to an enrollment of about 4,600 students.

The Doctor of Education (EdD) in Ethical Leadership offered by ONU, as well as leadership degrees offered by other universities, could benefit many leaders who did not receive leadership or ethics training in their undergraduate or graduate studies. These programs could also benefit those seeking to build upon what they have already learned, and those seeking personal and professional growth and development. While one can see how a doctoral program in leadership could benefit leaders in many different fields, the program offered by ONU has typically appealed to those in education. However, the resources available for advertising and recruiting have made expansion of the program to other fields more difficult. Because leadership programs could benefit a variety of professions, the allocation of limited resources is a matter of good stewardship for most universities.

The purpose of this study was to investigate the extent to which current master's degree students and recent master's degree graduates are a potential market for a doctoral degree in Leadership, especially the EdD in Ethical Leadership offered by ONU, in order to recommend steps for recruiting master's degree graduates into a doctoral program in Leadership.

Background

In 2007, the first cohort of 28 students started the EdD in Ethical Leadership program at ONU. The director of the program described the degree as, "a practitioner degree for those in leadership or 'rising stars' who hope to be in leadership" (H.

Thompson, personal communication, February 19, 2016). As of 2015, a total of 240 students had been accepted into the program, and 217 had started coursework.

Using admissions data (ONU, 2015), Table 1 shows the history of the number of students accepted into the EdD in Ethical Leadership program, and the average cohort size, by year. During the first five years of the program only one cohort was started each year. Cohort size ranged from as many as 30 students to as few as 14 students. In the sixth year of the program a second cohort was added. This brought the average size of the cohorts started that year down to 12. Likewise, in the seventh year, two cohorts were started, and although 37 students were accepted into the program, only 25 (67.6%) matriculated (or started taking classes), making the average cohort size 13. In the eighth year of the program a third cohort was added. This further reduced the average cohort size to ten, even though all 29 students accepted into the program that year started coursework. The ninth year of the program once again included three cohorts, and although a record number of 41 students were accepted into the program, only 30 (73.2%) matriculated, which kept the average cohort size at ten. The combination of additional cohorts and recent declines in the percentage of students that actually start taking courses had reduced the average cohort size of the program.

Table 1

Students Accepted and Cohort Size by Year

Year	Number of Cohorts	Number of Students Accepted	Number of Students Who Started Coursework	Percent of Students Who Started Coursework	Average Cohort Size Who Started Coursework
2007	1	28	28	100.0%	28
2008	1	30	30	100.0%	30
2009	1	16	16	100.0%	16
2010	1	21	21	100.0%	21
2011	1	14	14	100.0%	14
2012	2	24	24	100.0%	12
2013	2	37	25	67.6%	13
2014	3	29	29	100.0%	10
2015	3	41	30	73.2%	10
Total	15	240	217	90.4%	14

Note: Compiled from Olivet Nazarene University (2015).

The admissions data also revealed a variety of fields from which the accepted students had earned a master's degree. Table 2 (ONU, 2015) shows that the EdD in Ethical Leadership has most often appealed to students from the field of education, with 31.7% of those accepted having a master's degree in education. The next largest group of students accepted into the program had master's degrees from the field of business

(16.3%). No other field made up more than ten percent of students accepted into the program, but the wide range of fields is as an indication of the programs broad appeal.

Table 2

Students Accepted by Master's Degree Field of Study

Master's Degree Field of Study	Number Accepted	Percent of Total Accepted
Education	76	31.7%
Business	39	16.3%
Criminology/Sociology/Social Work/Psychology	20	8.3%
Masters (not specified)	17	7.1%
Religion	17	7.1%
Health Care	15	6.3%
Counseling	13	5.4%
Communication/Speech/English/Writing	12	5.0%
Human Resources	10	4.2%
Public Administration/Government	8	3.3%
Leadership	6	2.5%
Science/Technology	4	1.7%
Fine Arts	3	1.3%
Total Accepted	240	100.0%

Note: Compiled from Olivet Nazarene University (2015).

While students with a master's degree in education or business were almost half of those accepted into the EdD program, these two fields also conferred the most master's

degrees within the US. According to the U.S. Department of Education, National Center for Education Statistics there were a total of 754,229 master's degrees conferred during the 2011-12 academic year (Snyder & Dillow, 2015). Table 3 shows the number of master's degrees conferred by field for 2011-12.

Table 3

Master's Degrees Conferred in the United States, by Field, 2011-2012

Field of Study	Number of Master's Degrees Conferred	Percent of Total Master's Degrees Conferred
Business	191,571	25.4%
Education	178,062	23.6%
Computer Sciences and Engineering	66,014	8.8%
Humanities	59,979	8.0%
Social and Behavioral Sciences	48,723	6.5%
Natural Sciences and Mathematics	25,570	3.4%
All Other Fields	184,310	24.4%
Total	754,229	100.0%

Note: Compiled from Snyder and Dillow (2015).

Until more recently, students earning a master's degree only had two options when pursuing a research or professional doctoral degree, the Doctor of Philosophy (PhD) or the EdD. Berlin University offered the first PhD in the early part of the 19th Century, and Yale University conferred the first PhD in the US in 1861 (Schildkraut & Stafford, 2015). Harvard University conferred the first EdD in 1921. More recently, professional doctorates have emerged because, (1) practitioners asserted that PhD research lacked

relevance to their work, (2) students were interested in employment outside of academia, and (3) new skills were necessary for a new economy developed around information (Fenge, 2009). These developments led to the creation of the Doctor of Business Administration (DBA) in the early 1990s in the UK and Australia as a professional doctorate for business practitioners (Banerjee & Morley, 2013). There are now more than 20 subject areas in which one can earn a professional doctorate (Bourner, Bowden, & Laing, 2001).

Despite the growing number of options available to students pursuing a doctoral degree, the distribution of doctoral degrees conferred looks very different than the distribution of master's degrees conferred. Table 4 shows the number of doctoral degrees conferred by field for 2011-12 (Snyder & Dillow, 2015). While the business field conferred the largest group of master's degrees (25.4%), only 1.5% of doctor's degrees were in the business field. The natural sciences and mathematics field showed a 5.4% difference between conferred master's degrees (3.4%) and conferred doctor's degrees (8.8%). However, the health professions field (62,090) and the legal professions field (46,836) conferred most doctoral degrees. This explains the large percentage difference (41.9%) between master's degrees conferred and doctor's degrees conferred in the "All Others" category.

Because there are more than 150,000 fewer doctoral degrees than master's degrees conferred each year in the field of education, the director of the EdD in Ethical Leadership offered by ONU wrote that their program "is an interdisciplinary degree by design...more about personal development and growth" than career advancement (H.

Thompson, personal communication, February 19, 2016). As such, the EdD offered by ONU presents a research doctorate alternative to the PhD.

Table 4

Doctor's Degrees Conferred in the United States, by Field, 2011-2012

Field of Study	Number of Doctor's Degrees Conferred	Percent of Total Doctor's Degrees Conferred
Business	2,531	1.5%
Education	9,990	5.9%
Computer Sciences and Engineering	10,554	6.2%
Humanities	8,733	5.1%
Social and Behavioral Sciences	10,525	6.2%
Natural Sciences and Mathematics	14,974	8.8%
All Others	112,755	66.3%
Total	170,062	100.0%

Note: Compiled from Snyder and Dillow (2015).

While any type of doctoral leadership degree could be useful across a broad range of disciplines, the EdD offered by ONU places an emphasis on ethical leadership.

Treviño, Weaver and Reynolds (2006) have identified five central behaviors of ethical leaders: integrity, fairness, communicates ethical standards, care and concern for others, and shares power. Integrity involves being honest and trustworthy. Fairness includes transparency and not playing favorites. Communicating ethical standards means that the leader explains what ethical behavior is and promotes ethical values. Care and concern

for others means treating everyone with respect and dignity. Sharing power involves listening to others.

Other research supports that the ethical behaviors described by Treviño et al. (2006) have benefits for leaders and organizations. Choi, Ullah and Kwak (2015) found that ethical leadership inspires followers to go beyond their self-interest and to consider stakeholder's interests. Meanwhile, Ma, Cheng, Ribbens and Zhou (2013) linked ethical leadership to employee creativity.

While large lapses in ethical leadership have made the news, and educators from various fields recognize the need for more ethics training in their programs, an interdisciplinary doctoral degree in ethical leadership may be a valuable option for many leaders. Finding leaders who are interested in such a degree will likely require strategic advertising and recruiting practices in order to maximize the resources available for such an effort.

Research Questions

The four research questions that guided this study were:

1. To what extent are master's degree students/graduates interested in pursuing a doctoral degree?
2. What features do master's degree students/graduates look for in a doctoral program?
3. What are the obstacles for master's degree students/graduates in pursuing a doctoral degree?
4. What factors predict interest in pursuing a doctoral degree, especially in the area of Leadership?

Description of Terms

The following definitions provide specificity to the unique terms used in this study:

Ethical Leadership. Leadership that is a source of ethical guidance for those who are being led—whether they are employees or have some other relationship to the leader—and that takes responsibility for the moral development of those in their organization. Behavioral standards that management/leadership both exemplifies and distributes throughout the organizational culture (Mihelic, Lipicnik, & Tekavcic, 2010).

Matriculate. “To become a student at a school and especially in a college or university” (“Matriculate,” n.d.)

Professional Doctorate. A doctoral degree typically associated with a particular vocational field, but not a medical degree or a PhD.

Research Degree. A doctoral degree that requires a dissertation involving original research—primarily the PhD.

Significance of the Study

According to the U.S. Census Bureau (2014), 20.2% of the population has earned a bachelor’s degree, and 8.5% of the population has earned a master’s degree; however, only 1.8% of the population has earned a doctoral degree. While these graduates received a general education or specific training in their chosen field, many will have lacked the leadership skills or the ethical sensitivities needed to lead an organization effectively because the teaching of ethics has either been neglected or because ethics courses have been elective (Alsop, 2006).

Leadership degree programs could be an opportunity for those who have already earned a master's degree to learn the leadership skills necessary to be an effective leader in an organization, and to learn how to apply those leadership skills ethically, all while earning a doctor's degree. The significance of this study was to identify the characteristics and factors of those students who are most likely to take advantage of this educational opportunity, so that ONU and other universities that offer Leadership programs are better able to allocate their advertising and recruiting activities toward these students. The good stewardship of resources is one way to exemplify ethical leadership, and the results found in this study should be helpful to universities as they allocate their resources in order to recruit doctoral students.

Process to Accomplish

The researcher developed a survey instrument to measure the interest of master's degree students and graduates in earning a doctoral degree, the features students are looking for in a doctoral program, the obstacles students face in pursuing a doctoral degree, and the factors that predict their pursuing a degree in Leadership. The survey instrument combined several new questions with questions adapted from other surveys.

The survey instrument contained four sections. The first section verified that the respondent met the qualifications of the study; that is, a master's degree student or graduate who has not yet started a doctoral program. This section also asked about the respondent's interest in three types of doctoral degrees, the DBA, the EdD, and the PhD. A final question asked if the respondent had an interest in any other type of doctoral degree, and if so, to write-in the degree.

Section two of the survey was only for those who had *no interest* in any doctoral degree in section one. This section asked a series of questions about why the respondent had no interest in any doctoral degree.

Section three of the survey was completed by those who expressed at least *a little interest* or higher to at least one of the doctoral degrees in section one. The first group of questions in this section listed seven areas of study and asked about the level of interest the student had in each area. Additionally, respondents had the option to write-in another field of interest if their field was not included in the previous list.

The next group of questions in section three measured respondents' attitudes toward earning a doctoral degree. Most of these questions came from a study concerning students' attitudes toward MBA programs (Brewer & Brewer, 2012), and were easily adapted for the current survey by replacing the MBA designation with the word doctoral. Additionally, the research of the current study added several attitudinal questions concerning ethics, leadership, and earning a degree from a state university versus a religious university.

Another group of questions in section three measured respondents' preferences when considering a doctoral program. The researcher developed many of these items from a study on recruiting students for doctoral programs in marketing (Davis & McCarthy, 2005). The questionnaire that Davis and McCarthy used was not included in their journal article; however, the current researcher used the results reported by Davis and McCarthy to write several questions. Additionally, the researcher added items concerning the importance of attending a state university, a private university, and a

religiously affiliated university, as well as a few factors based on the researcher's own experience as a doctoral student.

The final group of questions in section three asked about motivations and obstacles in pursuing a doctoral degree. A portion of a study by Forray and Goodnight (2014), concerned with recruiting minority students into business PhD programs, was adapted for the current survey instrument. Additionally, respondents had the option to indicate if they faced other obstacles in pursuing a doctoral degree, and if so, to write-in these obstacles.

Section four of the survey asked several demographic questions including gender, age, current work situation, current class-load, field of study, and from which university they received the survey invitation. These characteristics were important for describing differences in degree interest, attitudes, program preferences, and obstacles. The demographic items were also important for making recommendations concerning the factors that predict student interest in a particular degree or program feature.

A few experts in the field of education and sociology reviewed the survey instrument and provided feedback to the researcher. In addition, the researcher piloted the survey instrument with a small group of graduate students, and solicited their comments in a focus group setting.

The researcher obtained permission from several universities and seminaries in order to send the survey instrument to current master's degree students and recent graduates. These universities represented a good mix of private and public, religiously affiliated and secular universities. The universities also had a sufficient number of graduate students in various programs in order to identify characteristics that helped

predict student interest in various doctoral degrees. Table 5 lists the schools that participated, whether they were a private or public university, if they had a religious affiliation, and how many master's degrees each conferred in a recent academic year.

Table 5

Universities and Seminaries Participating in the Study

University Name	Public or Private	Religious Affiliation	Master's Degrees Conferred
Avila University	Private	Catholic	162
MidAmerica Nazarene University	Private	Nazarene	175
Nazarene Theological Seminary	Private	Nazarene	37
Olivet Nazarene University	Private	Nazarene	567
Penn State University	Public		1,787

Note. Compiled using www.Scholarships.com and www.gradschool.psu.edu: Avila University (Scholarships.com, 2015a); MidAmerica Nazarene University (Scholarships.com, 2015b); Nazarene Theological Seminary (Scholarships.com, 2015c); Olivet Nazarene University (Scholarships.com, 2015d); Penn State University (2015).

The researcher used SurveyGizmo.com to place the survey instrument online. SurveyGizmo.com included the necessary survey logic so that respondents who had no interest in pursuing any doctoral degree received only the questions appropriate for them. The researcher sent participating universities a cover message, with a link to the survey instrument, inviting students to complete the survey. The universities then emailed the message to current master's degree students and recent graduates.

In order to increase the response rate, the researcher offered an incentive to respondents who completed the survey; the chance to win one of three \$100 gift cards redeemable at Amazon.com. In order to do this, and to keep the survey anonymous, the

researcher added a link to the *Thank you* page of the survey, which redirected the respondent to a separate form where the respondent could enter his or her first name and email address.

The researcher used SPSS Statistics to analyze the survey data. In order to answer research question 1, “To what extent are master’s degree students/graduates interested in pursuing a doctoral degree?” the researcher ran frequencies, means and standard deviations on the questions found in section one of the survey instrument.

In order to answer research question 2, “What features do master’s degree students/graduates look for in a doctoral program?” the researcher ran frequencies, means and standard deviations on the group of questions found in section three of the survey instrument. In addition, crosstabs between this group of questions in section three and the degrees in section one helped to determine if certain program features were associated with a particular degree.

In order to answer research question 3, “What are the obstacles faced by master’s degree students/graduates in pursuing a doctoral degree?” the researcher ran frequencies, means and standard deviations on another group of questions found in section three of the survey instrument. In addition, crosstabs between this group of questions in section three and the degrees in section one helped to determine if certain obstacles were associated with a particular degree.

In order to answer research question 4, “What factors predict interest in pursuing a doctoral degree, especially in the area of leadership?” the researcher ran three regression analyses in order to determine which variables from sections three and four of the survey instrument predicted student interest in pursuing a doctoral degree, which

variables from sections two and four of the survey instrument predicted *no* student interest in pursuing a doctoral degree, and which variables predicted student interest in earning a doctoral degree in the area of Leadership.

The researcher obtained approval for the current study from the ONU Institutional Review Board. Additionally, Brewer and Brewer (2012) granted their permission to adapt questions from their survey instrument for the current study; however, the researcher was unable to locate the authors of two other articles.

Because participation in the survey was voluntary, and because the participants' identities remained anonymous, risks to the participants were minimal, if any.

Summary

The current study contributed to the body of knowledge concerning the degree of interest master's degree students and graduates have in earning a doctoral degree. Specifically, the researcher examined the characteristics, preferences, and obstacles of those students interested in earning a degree in Leadership. Research suggests that many master's degree programs are examining how to incorporate ethical training for leaders into their curriculum—especially for degrees in the field of business. Furthermore, research has shown ethical leadership to have a positive impact on the effectiveness of organizations and their cultural values. This study has provided the faculty and staff of universities that offer a doctoral degree in Leadership with information that should help them allocate their resources more effectively in order to recruit the next generation of ethical leaders.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

The decision to pursue a doctoral degree varies by one's vocational interests, goals, motivations, finances, and other personal circumstances. Understanding these factors is critical for universities as they develop doctoral degree programs. While 1.8% of the population has earned a doctoral degree (U.S. Census Bureau, 2014) very little is known about how many graduate students are interested in pursuing a doctoral degree. Furthermore, educators need research showing the factors that either hinder students' doctoral pursuits, as well as the dynamics that make it possible for students to follow through on their educational aspirations.

One such study looked at the interest of MBA students in earning a PhD in marketing. Davis and McCarthy (2005) surveyed 730 MBA students and recent graduates and found that 91% were not considering a PhD in marketing; however, the researchers discovered that 32% of the MBA students reported that they would consider pursuing some type of PhD in the future. Today, there are additional types of doctoral degrees available other than the PhD, and the development of online programs is making doctoral education accessible to more students.

Development of Doctoral Education in the United States

Continual adaptation to the needs of the culture and students has marked the development of doctoral education in the United States. Conferral of the first PhD in America, awarded by Yale in 1861 (Geiger, 1986), happened in the same year as the U.S. Civil War began. The Morrill Act of 1862 followed, which granted federal land to each state for the purpose of establishing at least one college with a focus on agriculture and mechanical arts, while allowing for other scientific and classical studies. Before the Morrill Act many states were reluctant to commit funds toward higher education; however, states quickly took advantage of these land grants and the development of the state university began to accelerate (Geiger, 1986).

Both Geiger (1986) and Berelson (1960) agree that the German system of higher education, which prepared one for a profession in law, divinity, civil service, or education, and emphasized original investigation, heavily influenced graduate study in America; however, the American adaptation was less focused on professional activity and more focused on academic achievement (Berelson).

Another significant development occurred in 1869 when Charles W. Eliot became the president at Harvard. Eliot implemented an elective system of coursework so that students could pursue learning in new subjects and in specialized fields. One of the main reasons why Eliot could offer electives was the distinguished faculty Harvard possessed. Thus, the elective system created a division between schools that could pursue knowledge advancement from schools that could not (Geiger, 1986).

An important period of growth and adaptation occurred between 1876 and 1900. The *University Revolution*, as Berelson (1960) referred to it, started with the founding of

Johns Hopkins in 1876 and ended with the establishment of the Association of American Universities (AAU) in 1900. The driving forces of this revolution seemed to be “the needs of the times, the pressures of science upon the classical curriculum, the patriotic competition with the German system, the dissatisfaction with the current character of collegiate instruction, [and] the inherent attractions of advanced study” (Berelson, p. 9). According to Geiger (1986), Johns Hopkins’ primary purpose was to elevate American graduate education to a level equivalent to that in Germany. To that end, Hopkins did much to standardize the PhD in America, with an emphasis on original investigation. Additionally, The AAU helped to establish greater uniformity in PhD requirements, gave American doctorates recognition in foreign countries, and gave strength to weaker American universities by lifting their standards (Geiger).

This early growth in doctoral education occurred concomitant with academic societies and their academic journals. It was during the period from 1876 to 1905 that at least 15 significant scholarly societies were formed, with academic journals established in each of these major disciplines: *American Chemical Society*, 1876; *Modern Language Association of America*, 1883; *American Historical Association*, 1884; *American Economic Association*, 1885; *Geological Society of America*, 1888; *American Mathematical Society*, 1888; *American Academy of Political and Social Science*, 1889; *American Psychological Association*, 1892; *American Physical Society*, 1899; *American Philosophical Association*, 1901; *American Society of Zoologists*, 1902; *American Anthropological Association*, 1902; *American Political Science Association*, 1903; *American Sociological Society*, 1905 (Berelson, 1960).

The multiplication of academic journals resulted in increased professionalization and the creation of more specialized university departments, which led to the founding of the American Association of University Professors in 1915 (Geiger, 1986). Before 1920 academic journals covered their disciplines generally; however, after 1920, as doctoral programs continued to expand into more specialized fields, new academic journals reflected this shift toward specialization. Some examples included: *Journal of Applied Physics*, 1930; *Philosophy of Science*, 1934; *Journal of Polymer Science*, 1945 (Berelson, 1960).

World War I also played a role in the professionalization and specialization of doctoral research as increased technological development during World War I demonstrated the value of research. “To scientists, educators, statesmen, and the lay public, the role of research in winning the war symbolized the marriage of pure and applied science” (Geiger, 1986, p. 95).

It was this context of growing professionalization and specialization from which professional doctorates emerged, and which led Harvard University to establish the Doctor of Education (EdD) in 1921 (Kot & Hendel, 2012). Kot and Hendel wrote,

Little is known about the history of professional doctorates in the USA, because of a dearth of research on the subject and the lack of systematic data collection on these degree awards. The best known type of professional doctorate, the EdD, emerged in the first quarter of the twentieth century, and was later offered in other disciplinary areas. (p. 351)

Professional doctorates continued to expand after World War II, along with the number of institutions that offered doctorates. According to Berelson (1960), while

private universities were the first to offer doctoral degrees and conferred considerably more degrees than public universities, by 1958 public universities conferred more doctorates than private universities. This shift occurred because the number of institutions conferring doctoral degrees grew from 38 in 1908, to 69 in 1928, to 175 in 1958 (Berelson). Additionally, the expansion of doctorates into more fields built pressure on institutions to make doctoral education more practical and less academic, which led some to argue that the professional fields, such as Business Administration, Engineering, Library Sciences, etc., should have their own doctoral degree rather than conferring the PhD (Berelson).

Indeed, many types of doctorates beside the PhD began to appear. Kot and Hendel (2012) wrote, “The expansion of professional doctorates in the USA occurred in the third quarter of the twentieth century” (p. 351). For example, Columbia University awarded the Doctor of Engineering Science in 1953 (Kot & Hendel). In the 1960s, the Doctor of Nursing Science was established (Edwardson, 2001). The University of Illinois created the Doctor of Psychology in 1968 (Peterson, 1968), and in 1970, the Association of Theological Schools officially approved the Doctor of Ministry as the standard terminal degree for clergy (Tucker, 2006). In fact, Tucker found that beside the PhD and EdD there were 34 different types of doctoral degrees conferred during the 1961-62 academic year.

In addition to the availability of new kinds of doctoral degrees, the number of universities that offered doctoral degrees also continued to grow. According to a report from the National Science Foundation (NSF), “The greatest growth in doctoral programs

at U.S. institutions of higher education was in the 1960s and 1970s, after the Soviet Union launched the satellite *Sputnik*” (Thurgood, Golladay & Hill, 2006, p. 5).

From the 1990s through the early 2000s, the continual growth in various types of doctoral degrees awarded, and in the number of institutions offering doctoral degrees, led the Higher Learning Commission (HLC) in 2005 to create a task force concerning professional doctorates (Kot & Hendel, 2012).

The task force made a number of recommendations centered on three overarching issues: institutional context, core characteristics and collaboration. It concluded that: (1) the HLC needs to continue its focus on the capacity for institutions to establish and support effective programs leading to professional doctorate awards; (2) the Commission and other institutional accrediting bodies need to establish the ‘core characteristics’ of acceptable professional doctorate programs; and (3) a national dialogue among institutional accreditors, including specialized accrediting agencies, is critical in creating standards for professional doctorates. (Kot & Hendel, p. 353)

More recently, Kot and Hendel (2012) looked at the types of doctoral degrees offered by a select group of 32 U.S. universities. They found that these institutions offered 33 separate professional doctorates, some which were research oriented and some that were not. Furthermore, the NSF recognized 13 of these 33 doctorates as research doctorates equivalent to the PhD. Kot and Hendel wrote, “As for the NSF, it recognizes 48 doctorate awards as equivalent to the PhD” (p. 352).

Comparing Doctoral Degrees

How do professional doctorates, not including medical degrees such as the MD or DDS, or law degrees such as the JD, compare with the PhD? There has always been a perception that the PhD—having been the first doctoral degree, and with an emphasis on discovering new knowledge—was superior (Berelson, 1960; Dreher & Glasgow, 2011; Neumann, 2005; Roszkowski & Berna, 2012). Others maintain that professional doctorates add relevance to doctoral education by meeting the needs of the workplace (Fenge, 2009; Fink, 2006; Gill & Hoppe, 2009).

According to Fenge (2009) there are three main reasons why professional doctorates emerged: (a) PhD research was not relevant for practitioners, (b) many doctoral students were interested in employment outside of academia, and (c) the knowledge economy—where information is the basis of consumption and production—created new demands for professional workers. Therefore, one of the main distinctions is that PhD programs trained students as academic researchers, and placed considerable weight on research methodologies and data-analysis techniques, whereas professional doctorates focused on the career development of students using research-based practices (Bourner et al., 2001). Maxwell (2003) called this distinction the difference between professional researchers (students in PhD programs) and researching professionals (students in professional doctorate programs). Following are some studies that looked at specific programs.

Gill and Hoppe (2009) conducted a survey comparing the types, uses, designs, motivations, accreditations, and international scope of doctoral programs. Their analysis gave particular attention to whether or not business doctorates were valuable for both

academia and industry, how these two worlds shared information, and the role business doctorates had in putting research into practice. Gill and Hoppe found that professional business doctoral programs are growing rapidly in most of the world, but not in the U.S. Professional degrees are valued in Europe—especially Germany—but are seen as inferior in the U.S. because academia overly emphasized knowledge creation and publication. Gill and Hoppe noted that accrediting agencies welcomed professional degrees, and that there was a student demand for professional degree programs because non-AACSB accredited programs were doing well. Gill and Hoppe also observed that when information flowed between academia and business, almost all the observable data and knowledge of effective practice came from the business world. For the business professional doctorate, the student acted as a link between the local business community, professional practice communities such as marketing, finance, etc., and the disciplinary research community known as academia.

Nelson and Coorough (1994) examined PhD and EdD dissertations to determine what differences, if any, the two degrees had with regard to their research requirements. From the 10,614 dissertations published in *Dissertation Abstracts International* for the years 1950, 1960, 1970, 1980, and 1990, the researchers selected a stratified random sample of 1,967 dissertations to study. The sample matched the overall percentage of dissertations in terms of degree (51% PhD, 49% EdD), gender (67% male, 33% female), and area of concentration. Nelson and Coorough found that the relative percentage of PhD degrees increased from 23% in 1950 up to 56% in 1990. The researchers also reported that the percentage of dissertations written by women grew dramatically—from none in 1950 up to 49% in 1990—and they noted a significant difference in the use of

statistical analysis. While both degrees used descriptive statistics more than other types of analyses, PhD candidates included more multivariate statistics. Another difference reported by Nelson and Coorough was that EdD dissertations most often used a survey instrument, while PhD dissertations often used an experimental research design. The researchers stated that the EdD remains more oriented to someone in professional practice than the PhD.

Eddy and Rao (2009) studied the differences in course content and requirements of EdD and PhD programs in order to assess how well the programs were meeting the needs for future leaders of community colleges. The researchers found only minor differences in the structure of EdD and PhD programs, which the authors wrote were insignificant. Course options within EdD programs were more prescriptive and tended to focus more on important skills needed for practitioners, while PhD programs allowed more choice in course work related to students' interests. However, Eddy and Rao reported important differences in the delivery of the degree programs. A higher percentage of EdD programs used a cohort model compared to PhD programs, 38% versus 12%, respectively. Also, a number of EdD programs included internship requirements whereas PhD programs did not.

Schildkraut and Stafford (2015) examined the differences between the PhD and professional doctorates in the field of criminology and criminal justice (CCJ). The authors found that 42 universities belonged to the Association of Doctoral Programs in Criminology and Criminal Justice (ADPCCJ), and that there were a variety of doctoral degrees offered, including the PhD, the Doctor of Strategic Security (DSS), the Doctor of Psychology (PsyD), the Doctor of Management (DM), and the Doctor of Business

Administration (DBA). Schildkraut and Stafford wrote that the PhD programs focused on developing research skills, which included criminological theory, statistics, and research methodology; however, only two of the professional doctorates required a theory course. Another difference was in the type of electives available to students. Electives in PhD programs emphasized critical thinking and research skills, while electives in professional doctorate programs had a more practical application. The authors wrote that the most notable difference was in the backgrounds of the faculty, where professors in traditional PhD programs usually came directly from completing their doctoral program, whereas professors in professional doctorate programs had considerable work-related experience.

Sarros, Willis, Fisher and Storen (2005) surveyed 18 universities in Australia that offered the DBA degree. The authors found that most universities emphasized the practical application and outcomes of the DBA degree compared to the theoretical perspectives of the PhD, and that coursework and dissertation research in the DBA programs stressed relevance to the students' careers. The authors also noted that, because the DBA was a relatively new degree, there was some inconsistency between the various DBA programs concerning dissertation requirements and assessment criteria; therefore, the authors recommended a set of guidelines in order to standardize DBA programs.

Motivations for Earning a Doctoral Degree

Motivations are what get students through the difficult times that inevitably occur during a doctoral program (Churchill & Sanders, 2007). Motivations vary by *level* (or amount), which can be evaluated quantitatively by measuring enthusiasm for a particular undertaking, and motivations vary by *orientation* (or underlying attitudes), which can be

assessed qualitatively by examining the beliefs behind performing a particular task (Ryan & Deci, 2000). The literature shows that motivations are generally mixed and complex.

In *Getting Your Ph.D.: A Practical Insider's Guide*, Churchill and Sanders outlined five core motivations students often have for pursuing a doctoral degree: (a) *career development*, or the desire to enhance one's current career or to develop a new one, (b) *lack of job satisfaction*, or the desire to transition to a new job, (c) *personal agenda*, or the desire to become an expert in something that affects you personally, (d) *research as politics*, or the desire to influence political or social change, and (e) *drifting in*, or the result of unplanned or unforeseen circumstances.

Taking a slightly different approach by organizing motivations around career stage and objective, Gill and Hoppe (2009) identified five motivational profiles for pursuing a doctoral degree. They named the first profile *Traditional*. This profile describes someone who enters a doctoral program in the early stages of their career with the objective of entering into academia. The second profile is *Advanced Entry*. This profile is similar to the Traditional profile in that it occurs in the early stages of one's career; however, the objective is professional development and career advancement. The third profile is *Continuing Development*. This profile describes someone in mid-career with the objective of improving professional skills and career advancement. The fourth profile is *Transition*. This profile describes someone in mid- to late-career with the objective of entering into a new career. The fifth profile is *Personal Fulfillment*. This profile describes someone in any stage of career with the intrinsic objective of self-enrichment. Gill and Hoppe noted that more than one profile could motivate an individual candidate.

While broad categories and profiles can be helpful, much of the research demonstrates the difficulty of placing students into one particular category. Wellington and Sikes (2006) surveyed doctoral students in an EdD program at the University of Sheffield concerning their motivations for pursuing a professional doctorate and the impact this pursuit had on their professional and personal lives. The authors noted that very little research existed that studied the motivations of doctoral students; moreover, the research that did exist focused mainly on those pursuing a PhD. The researchers received 29 (33%) completed surveys with responses to the following four questions: (a) Why did you decide to do a doctorate? (b) Why did you choose a professional doctorate? (c) What impact (if any) has it had on your professional life? (d) What impact (if any) has it had on your personal life? The authors wrote that, “it is difficult to classify motivations as extrinsic or intrinsic” (p. 732) because the respondents had multiple motivations for pursuing a doctorate; however, several respondents believed they needed a doctorate in order to keep their current jobs secure. Other respondents wrote that they wanted intellectual stimulation or that they had a quest for new knowledge. Some students gave personal satisfaction or their sense of identity as a reason.

Although most of the research suggested a complex mix of motivations, many of the studies identified specific intrinsic and extrinsic motivations. De Meyer (2013) identified changes in the economy and workplace as one such motivation for earning a doctoral degree. De Meyer used case study observations in order to examine new avenues of doctoral education in business administration. Noting the international growth in demand for PhDs and other types of doctorates in business administration and management, the author observed four directions of change. The first direction was in the

rise of the *knowledge economy*. Knowledge economies occur when the knowledge of workers creates value for customers and businesses, rather than value created from the manufacturing of products. De Meyer wrote that doctoral education is essential for knowledge economies. A second direction is in increased mobility and opportunities outside of academia for doctoral degree holders. Those with a doctorate are able to move more freely between business, teaching, and other types of professions. A third direction is the increased demand for doctoral degree holders internationally. The fourth direction is the lack of geographic and organizational boundaries for information. Information is no longer concentrated in universities or major corporations. Access to information is largely ubiquitous. De Meyer also wrote that major funders of education—governments, foundations and industry—will seek more efficiency and return on their investments.

Changes in the economy are certainly not the only motivation for pursuing a doctoral degree. Clark (2007) interviewed a cohort of 17 students in a new Doctorate of Education program in Australia. Clark found that these students were in the middle to late stages of their careers and that students did not typically identify just one motivation for pursuing their degree; rather, they identified a complex mix of both personal and professional development goals. An interest in learning was the one characteristic that all of the students seemed to have in common.

It is not difficult to imagine that an interest in learning is helpful for someone pursuing a doctoral degree; however, by itself, an interest in learning is probably not enough to move one to take on the challenge and expense of doctoral work. Leonard, Becker, and Coate (2005) studied individuals who graduated with a doctorate in Education in the years 1992, 1997, and 2002 in the UK. They wrote concerning the

students' motivations that, "in making the initial decision, the personal growth aspect of the doctorate equaled the 'training and qualification' elements, and in both respects the powerful aspirational value of the doctorate shone through" (p. 139). The authors also found that some who pursued the doctorate for vocational reasons questioned the degree's economic usefulness if the degree did not result in a promotion or was subsequently determined to have been in the wrong field. The authors suggested that students would benefit from early guidance concerning one's career in addition to the academic guidance they receive.

Wong (2014) interviewed 21 working adults enrolled in a Doctor of Professional Studies in Information Management program at Syracuse University in order to study their motivational orientations. Although those in the sample expressed a mix of personal and professional reasons for pursuing a doctoral degree, the most common motivational orientation was *self-cultivation*, characterized by a love for learning and expressed in having a personal goal of achieving a doctoral degree, along with the sense of satisfaction the degree brings. The next most common motivational orientation for these student/working professionals was *self-improvement*, characterized by better job performance and career advancement. Wong also found two demotivating factors. The most important demotivating factor was the loss of time one had available to spend with family and friends. A second demotivating factor was negative attitudes expressed by faculty concerning the professional studies doctorate and the students enrolled.

Brailsford (2010b) conducted another study showing a complex mix of motivations. The researcher interviewed 11 recent PhD in history recipients in Australia concerning their motivations for pursuing a doctoral degree. All the interviewees had

career experience and were in their 30s and 40s. Brailsford found that these doctoral recipients had complex and overlapping motivations for pursuing their doctorates. Career or employment goals were what initially motivated eight of the students, while personal achievement was the main motivation for three students. Several of those interviewed said that a strong interest in their dissertation topic was a very important motivational factor. Several also expressed anxiety in taking on the risk of failure and the uncertainty of completing their PhD, but it was unclear if certain motivations are more helpful than others are in overcoming these risks and uncertainty. Brailsford suggested that it would be helpful for doctoral students to know what initially motivated them to pursue a doctoral degree in order to help them stay motivated until completion. He wrote that one way of doing this would be for students to articulate their motives with an independent advisor who could help the students record their motives and aspirations in a way that could be useful for reflection and encouragement when the students find themselves struggling to complete their degrees.

Some researchers suggested that motivations could change throughout the course of a doctoral program. Kemp, Molloy, Pajic, and Chapman (2014) studied the motivational orientations of 17 biomedical PhD students in Australia. The researchers found that the most commonly reported motivational orientation for these students was extrinsic (16 out of 17 students), expressed in terms of receiving the reward of a better job and getting ahead. However, a majority of students (11 out of 17) also had an intrinsic motivational orientation, expressed in terms of having an interest in the topic and finding the field rewarding. Kemp et al. wrote that complex, interconnected environmental

factors, which are likely to change at different stages of the doctoral degree process, likely affect students' motivational orientations throughout their study.

Several studies have suggested that motivations change as people age. Boshier (1971) surveyed 233 participants in an adult education program. He found that as people age their motivations shift from pragmatic reasons (e.g. to get a better job) to utilitarian reasons (e.g. I have an interest in this topic). On the other hand, Hegarty (2010) wrote that the *Academic Motivation Scale* "has been used reliably to study and measure motivation levels in elementary, high school, and undergraduate university students. The results of these studies returned the finding of decreased intrinsic motivation with age" (p. 48). Hegarty's study of 240 business and education graduate students found that the business students were significantly less intrinsically motivated than were the education students, and that overall, graduate students tended to be more extrinsically motivated than intrinsically motivated.

Green and Kelso (2006) surveyed 563 adult learners at a California university in order to discover their motivations for seeking a degree. Green and Kelso described adult learners as independent, having responsibilities and an identity beyond being a student, and having major life experiences such as marriage, divorce, children, and career changes. The average age of those surveyed was 33.9 years. The survey item ranked highest for affecting motivation was "Personal pride in my efforts and success;" however, "respondents indicated that teacher behaviors are more likely to affect their desire and efforts to succeed (motivation) in class than either personal or institutional-structural factors" (p. 68). Respondents also indicated that teacher behaviors could be demotivating. Green and Kelso wrote that while personal motivations are what move adult learners

toward furthering their education, the influence of teacher behaviors are important for helping adult students to overcome the additional challenges and stresses that pursuing a degree add to life.

Short (2004) interviewed 12 doctoral students over the age of 50 in order to understand their motivations for pursuing the degree late in their careers. While the author found that respondents often had more than one motivation, the main motivations were to further one's career, to better serve others, a love of learning, or wanting a career change.

Features Students Look for in a Doctoral Degree Program

Most of the research concerning features that students are looking for in a doctoral program uses current students or graduates and asks them to look back in time for reasons why they chose a particular degree or program. In the Wellington and Sikes (2006) survey discussed earlier, when asked why they chose a professional doctorate, the students most often gave reasons related to the structure of the program: the support of a cohort, the ability to fit the program into their lives, the timetable to complete the degree, and course work related to their current employment, were all reasons for choosing the professional doctorate rather than the PhD. The students placed a high value on the collegiality and social interaction that many professional doctorates offer. The respondents also reported being more reflective, having greater self-esteem, and having improved skills that are relevant to their profession.

Offerman's (2011) research suggests that doctoral programs need flexibility. Offerman used existing research in order to create profiles of traditional and non-traditional doctoral students. He wrote that over the last 50 years there has been a shift in

doctoral education toward professional degrees, and that, “the contemporary doctoral student is, by and large, nontraditional” (p. 21), meaning students are older, work full-time, are often married with children, and have numerous reasons for pursuing a doctoral degree. The result is that students bring a lot more career experience to the educational setting, and faculty—although they have less interaction with their students—must now facilitate the doctoral process, act as both a coach and colleague, and support applied research. Additionally, because students are balancing their careers, family, and doctoral studies, students are looking for a flexible schedule and alternative ways to complete course work, such as weekend, evening, and online courses.

Other research stresses the quality of the faculty and the reputation of the program, but only if the student can afford such quality. In a study of 540 students accepted into a doctoral program and 89 faculty and student affairs officers involved in the admissions process, Bersola, Stolzenberg, Fosnacht, and Love (2014) found that faculty quality was the most important factor for students when selecting a doctoral program, followed by research quality, access to faculty, and the reputation of the program. The researchers wrote that, “students who received financial support enrolled at higher rates than those who did not receive support” (p. 525). The authors also found that faculty frequently overrated the importance of financial support, and non-matriculating students reported that nonfinancial factors played a major role in their choice of which school to attend. However, students gave strong consideration to schools with a lower academic reputation when those institutions offered a better financial package and more faculty interaction.

For some students, practical application drives their educational choices. Zambo, Zambo, Buss, Perry, and Williams (2014) studied 296 students at 14 institutions affiliated with the Carnegie Project on the Education Doctorate (CPED). CPED began in 2007 as an effort to redesign EdD programs by focusing on educational practitioners, and to therefore distinguish the degree from the PhD degree. Zambo et al. found that the main reason for choosing an EdD program was a student's interest in leading change. Students wanted to solve real-world problems and make a difference. Students that had career-oriented goals chose an EdD program to increase their career options and for advancement. Also, students chose an EdD program because they felt it valued their practical knowledge and experience.

Much of the literature on doctoral education was concerned with lowering student attrition rates and the program features or personal characteristics that help students complete their degrees. Citing high attrition rates in doctoral programs, Santicola (2013) investigated the characteristics of individuals that helped them complete a doctoral cohort in education. Santicola interviewed 27 doctoral graduates from Robert Morris University's Instructional Management and Leadership (IML) program and found that four themes emerged from the data, including (a) being committed and disciplined, (b) putting the doctorate first, (c) having a preference to work and do research independently, and (4) having full-time employment. Respondents acknowledged the support they received from other cohort members, but expressed reasons such as "getting things done quicker" for their preference to work alone. Santicola noted that most of the students worked full-time, and that this characteristic was as much about the design of the program as it was for students' financial needs.

Spaulding and Rockinson-Szapkiw (2012) studied the factors that helped doctoral students in education persist through the completion of their degree. The researchers interviewed 76 EdD graduates. The graduates reported that rigorous research and writing courses were very important in helping them meet the challenges of writing their dissertations. The courses were closely associated with high quality, knowledgeable faculty. The graduates were also strong advocates of the cohort model. Some of the graduates reported that online programs were essential in allowing them to remain in their current locations and jobs, while other graduates reported that meeting with faculty and other students in a classroom setting helped them to persist.

Reviewing data released by the Council of Graduate School's PhD Completion Project, Jaschik (2007) wrote that the main factors new PhD recipients contributed to their degree completion were: (a) financial support (80%), (b) mentoring/advising (63%), (c) family support (60%), (d) social environment and peer support (39%), (e) program quality (39%), and (f) professional and career guidance (30%). Concerning financial support, the need to borrow more money led to a lower degree completion rate. Also, mentors were especially helpful when it came to the student's dissertation research.

Two issues impacting the future of doctoral education and the program choices students' have are technology and globalization. In a white paper published by The Economist Intelligence Unit, Glenn (2008) wrote, "advanced technologies will put education within the reach of many more individuals around the world, and will allow greater specialisation in curriculum and teaching methodologies than ever before" (p. 16). This statement was based on surveys and in-depth interviews conducted by The Economist Intelligence Unit's editorial team. The surveys and interviews included

responses from 100 corporate executives worldwide and 189 leaders in higher education. Reporting on the survey and interview results, Glenn concluded: (a) technology will play a significant role in attracting both students and corporate partners to particular institutions or programs that are using technology well, (b) online education will extend the university's reach around the world, (c) universities will need to develop partnerships with corporations in order to keep up financially and technologically, (d) although technology is generally viewed positively, it will also be disruptive, and (e) universities will become increasingly global.

The *Task Force Report on the Professional Doctorate*, produced by the Council of Graduate Schools (2007), agrees that professional doctorates are compatible with online education. The report concludes that those seeking a professional doctorate are often already working in their field of study and would not want to quit working or relocate, making an online program desirable. In addition, these professionals are accustomed to working online, and any clinical or field experience required by a doctoral program usually takes place outside of the university setting.

Obstacles to Earning a Doctoral Degree

The literature concerning obstacles students must overcome in order to earn a doctoral degree focus on time management, costs, and academic ability or academic mismatch. In most cases, students faced more than one type of obstacle that they needed to overcome. For example, Short (2004) found four primary challenges in her interviews of adults over age 50: (a) time management, (b) financial management, (c) family commitments, (d) and academic challenges and discipline. Short wrote, "But the rewards

of a sense of accomplishment and recognition of the doctorate seem to overcome any obstacles” (p. 95).

West, Gokalp, Pena, Fischer and Gupton (2011) studied the barriers EdD students faced while trying to complete their degrees, and the helpfulness of a doctoral support center (DSC). The researchers used a mixed methods approach involving a survey of 103 students and a focus group involving nine volunteers. All participants were from a private research university in the southwest and had started their doctoral programs between 2000 and 2007. West et al. found that the most common challenge for EdD students was time management, with 60% of students identifying this as a problem. Related to this was the difficulty of balancing work, life commitments, and school. Students also identified their relationship with their dissertation chair as a challenge; however, many students’ credited their relationship with their advisor as being vital to their success. Of the 69 students who responded to a survey question concerning the DSC, 73% reported their experience as being either good or excellent. Specifically, 55% said they received very helpful technical support, and 41% reported very helpful technical and emotional support from the DSC.

Wasburn-Moses (2008) reported similar findings when she surveyed doctoral students from 78 special education programs across the US. Wasburn-Moses received 619 responses, which she estimated to be 38.2% of the total number of doctoral students in special education programs. Wasburn-Moses found that the students were most satisfied with the mentoring and support they received; however, “Doctoral students felt least satisfied with their ability to juggle work and family and with their overall workload” (p. 265). One recommendation the researcher made in order to help students

manage their schedules was for the doctoral program to provide students with a clear structure while allowing for program flexibility.

Another barrier to doctoral education is financial cost. Earl-Novell (2006) interviewed 20 doctoral students in mathematics at the University of California Berkeley. The researcher found that these doctoral students used a variety of sources to financially support their education. Earl-Novell wrote that research suggested that self-financed students are less likely to complete their degree than students financed through awards, fellowships, or teaching assistantships; therefore, financial integration mechanisms are important for reducing attrition rates.

Financial costs may be an even bigger obstacle for minorities to overcome. In a study of 292 doctoral students who self-identified as minority students, Forray and Goodnight (2014) found that communication from other doctoral students and faculty were important factors in minority enrollment; however, a minority student's biggest barrier to pursuing a doctoral degree was the cost.

Academic ability—in the form of creativity—was a barrier for some students. For example, Lovitts (2008) conducted focus groups with the faculty of two highly ranked US universities—one public and one private—in order to understand which doctoral students are able to complete their dissertations, which marks the transition to being an independent scholar. The perception of faculty was that highly creative students were more easily able to complete the dissertation phase of the doctoral program, and often produced a dissertation that contributed more to new knowledge, which the faculty called a dissertation of distinction. Lovitts wrote, “to the extent that creative and practical intelligence appear to be more important than analytical intelligence in the transition to

independent, creative research/scholarship, universities may need to review the criteria they use to admit students to their doctoral programs” (p. 323).

A lack of academic ability may also be the result of a mismatch. Golde (2005) studied the impact that practices and culture had on doctoral attrition rates for four different departments (geology, biology, history, and English) located within one university. The data included student records, observation and interviews within each department, and interviews with 58 students who had left their doctoral programs. Golde found that “a mismatch between the student and the discipline was at the heart of much of the attrition” (p. 680). These students realized that their skills and interests were not compatible with a lifelong practice in their chosen field of study. Another type of mismatch was between student expectations and departmental expectations. Golde wrote that this type of mismatch happened more often in the humanities. Many students that found themselves in a mismatch with their department transferred to another program. A third type of mismatch was rooted in a lack of trust and support between student and advisor. Golde found that within science departments a student/advisor mismatch accounted for much of the attrition. For each type of mismatch, Golde recommended that departments act more proactively in providing information concerning the culture and practices of the department, as well as facts about the disciplinary field, in order to help prospective students discern whether or not a particular program is a good fit.

High attrition rates have been a concern in academia for some time, and are an indication of the difficulties students face in their doctoral studies (Brill, Balcanoff, Land, Gogarty & Turner, 2014; Denecke, Frasier & Redd, 2009; Smith, Maroney, Nelson, Abel & Abel, 2006). In a study of six universities in New Zealand, Brailsford (2010a) found

that from 1968 through 2009 the completion rate for 296 PhD students pursuing history doctorates was 64.5%, and the average time needed to complete the degree was four years and six months. Of those that completed the degree, 86.6% did so within seven years; furthermore, students who withdrew from a PhD program did so, on average, after three years of doctoral study. Brailsford also noted a large difference in completion rates between the top (75% completion rate) and bottom (48.9% completion rate) institutions, and he wrote that there is a need for further research in order to determine if there was an institutional or programmatic cause for the disparity.

With the intention of reducing high attrition rates, Smith et al. (2006) recommended stress-management programs in order to help doctoral students cope with family responsibilities, employment responsibilities, financial stress and other types of pressure.

There is some evidence that universities are trying to address the obstacles students' face. In response to several association reports stating that there was an increased demand for doctoral trained accountants and financial managers, the Metropolitan State University (MSU) developed a new DBA program designed to address the following issues: (a) student access to a doctoral degree, (b) relevant curriculum with a high degree of quality, (c) low dissertation completion rates, and (d) student drop-out rates and the time needed to complete a degree (Delmont, 2011). In response to the issues stated above, Delmont reported that the new DBA offered by MSU did the following: (a) equally weighted a students' GPA, GMAT score, years of professional work experience, and professional achievements, as well as delivered a part-time program that offered alternating Saturday classes and online work, (b) offered

elective courses in areas such as management consulting, teaching, and leadership, as well as free professional development workshops, all based on adult learning principles, (c) embedded three research courses within the first five semesters of the program in order to increase awareness and expectations for the dissertation, and (d) implemented multiple advising services and a cohort model to build a sense of community and faculty-teacher relationships.

The Need for Doctoral Degrees in Leadership

According to the *Global Human Capital Trends 2014* report (Schwartz, Bersin & Pelster, 2014), leadership was the most important issue facing businesses. Thirty-eight percent of companies rated the hiring or training of people with leadership skills as an *urgent* issue. Furthermore, the issue of leadership was urgent across all levels of management and business function, as well as all countries. The report also revealed that the gap between leadership readiness and leadership capability was larger than any other job related skill.

Other research supports the idea that organizations are looking for people with leadership skills. Eberhardt, McGee and Moser (1997) surveyed the head of the human resources office of 460 businesses listed in the 1993 *Hoover's Handbook of American Business* in order to determine the recruitment practices these businesses had toward MBA graduates. While their survey found that 78% of the companies reported recruiting MBA graduates, the top reasons given from those not recruiting MBA graduates were, (a) their organization had a policy to recruit from within (52%), (b) that MBAs lacked leadership training (20%), and (c) experience (16%). Eberhardt et al. also found that

employers rated communication skills, interpersonal skills, and leadership skills as the most important to their recruitment practices.

Furthermore, former students affirm the importance of leadership training. Hoyle and Torres (2008) examined the perceptions of former students concerning the quality and relevance of their doctoral programs in the area of school leadership preparation. The authors looked at six of the most prestigious universities in the US as ranked by *U.S. News and World Report* for the 2005-2006 academic year. Hoyle and Torres found that the former students from all six universities credited their success to interactions with highly skilled faculty and intellectually stimulating environments. The students indicated that classes in politics and policy, as well as case study coursework, helped their leadership practice most. On the other hand, students reported coursework outside leadership preparation programs as least helpful. Students from only four of the programs reported that their research courses were relevant to their school leadership position; however, the students most often mentioned mentoring by former faculty as a key to their leadership success.

Those that teach in leadership programs emphasize the relational nature of leadership. Hyatt and Williams (2011) explored the competencies current faculty teaching in U.S. doctoral leadership programs will need in the coming decade. The researchers gathered expert panels and used a multi-round format to determine competencies. The panel sample included 10 doctoral faculty members who taught in a leadership program at a regionally accredited university. The researchers found that many of the specific competencies were relational in nature rather than technical, and they reported that the top issues doctoral faculty will face include, (a) the changing nature of

organizations and leadership, (b) globalization, (c) funding and resources, (d) an abundance of accessible information, (e) student diversity, (f) new technologies, and (g) accountability.

Ethical Leadership

As outlined in Chapter 1, every vocation is in need of ethical leadership; however, research by Castiglia and Nunez (2010) found that many people perceive MBA students as unethical, and that MBA programs seem more focused on short-term profits and increased shareholder value rather than the development of ethical graduates. Their case study of an MBA program at a Catholic college that infused ethics throughout the curriculum found that 86% of the students believed the faculty cared deeply about teaching ethics, and that the discussion of ethical issues occurred naturally throughout the coursework. As a result, students and faculty reported that the inclusion of ethics in the MBA program enriched their experience. The authors noted that an area for further research would be whether or not faith-based universities had a natural advantage in integrating ethics into their curriculum, and if that gave faith-based universities a competitive advantage in the marketplace.

If doctoral programs teach ethical leadership, is there evidence that ethical leadership is effective in the workplace? Marsh (2013) interviewed 28 senior-level executives in order to examine their perceptions of ethical leadership. The author found that ethical leadership emerged from a framework of four value perspectives: (1) *Mindfulness*, or knowing right and good; (2) *Engagement*, or doing right and good; (3) *Authenticity*, or having the character to do right and good; and (4) *Sustainability*, or the value right and good has over time. Marsh wrote that this framework of ethical leadership

develops over time through relationships and life experiences. He concluded that relationship building and support networks were vitally important for the engagement value perspective, and also expanded one's awareness of ethical issues.

Yidong and Xinxin (2013) studied how ethical leadership influenced the innovative work behavior of employees. The researchers described innovative work behavior as the intentional launch of new and useful ideas, processes, or procedures to one's personal work or organization. They collected data from the administrative departments and the research and development offices at two large companies in China. Of the 400 employees surveyed in both companies, 302 completed a questionnaire for a response rate of 75.5%. Yidong and Xinxin found positive relationships between employees' perceptions of ethical leadership and innovative work behavior, and between employees' perceptions of ethical leadership and the intrinsic motivation of employees. "The positive relationship between ethical leadership and individual innovative work behavior also suggested that when ethical leaders embedded their moral values in the work,...their followers are more likely to exert innovative work behavior" (Yidong & Xinxin, p. 451). The authors also reported that when employee behavior is innovative, personal motivations more likely influenced the behavior than did the shared intrinsic motivations of the group.

Conclusion

Doctoral education has a significant impact in providing businesses, governments, schools and other organizations with employees who have the necessary skills and abilities to function in today's increasingly technical and global climate. Although only 1.8% of the population has an earned doctorate (U.S. Census Bureau, 2014), the attrition

rate from doctoral programs is high (Brailsford, 2010a) and there does not appear to be any research on the percentage of graduate students who would be interested in earning a doctoral degree if given the opportunity. While the literature shows that students pursuing professional doctorate degrees struggle to balance their work situations, families, and studies, there is little research on what program features graduate students say they are looking for, or the obstacles they perceive as preventing them from earning their doctoral degrees.

Summary

Since the first PhD was awarded by Yale in 1861 (Geiger, 1986), doctoral education has been adapting to the needs of society and to the students it serves. The increase in professional doctorates—including the number of programs, the types of degrees, and the number of recipients—during the last 50 years is notable (Geiger, 1986; Kot & Hendel, 2012; Thurgood et al., 2006).

While some have seen the PhD as superior when compared to professional degrees (Berelson, 1960; Dreher & Glasgow, 2011; Neumann, 2005; Roszkowski & Berna, 2012), others maintain that professional doctorates add relevance by meeting the needs of the workplace (Fenge, 2009; Fink, 2006; Gill & Hoppe, 2009). While a study of EdD and PhD programs found some minor differences in the structure of programs, and major differences in how the delivery of the programs, coursework and dissertation requirements were comparable (Eddy & Rao, 2009).

The literature revealed that student' motivations for pursuing a doctoral degree were often mixed and complex, and usually framed as intrinsic and extrinsic motivations (Clark, 2007; Leonard et al., 2005; Wellington & Sikes, 2006); however, this research

always involved current doctoral students or graduates. No literature was found that explored student' motivations before entering a doctoral program. Some research suggested that motivations change throughout the doctoral program (Kemp et al., 2014) or with age (Boshier, 1971; Hegarty, 2010). Other research found demotivating factors such as teacher' attitudes and behaviors (Green & Kelso, 2006; Wong, 2014)

Doctoral students looked for programs that were structured in such a way that the student could fit the program into his or her life (Wellington & Sikes, 2006), or were the program had flexibility (Offerman, 2011). Although students desired quality faculty and a university with a good reputation, financial considerations often affected the choices of students (Bersola et al., 2014; Jaschik, 2007). And since many students who enrolled in a professional doctorate program already had careers and families, they looked for programs that used technology and offered online courses (Council of Graduate Schools, 2007; Glenn, 2008).

High attrition rates were an indication that students faced many obstacles in pursuing a doctoral degree (Brill et al., 2014; Denecke et al., 2009; Smith et al., 2006). While the literature revealed that students often had to overcome more than one obstacle, time management—or the challenge of juggling work, family, and school—was the biggest challenge (Short, 2004; West et al., 2011; Wasburn-Moses, 2008). Financial costs were also a difficult barrier for some (Earl-Novell, 2006), especially for minorities (Forray & Goodnight, 2014). Additionally, some students dropped out or transferred to another program because they were academically mismatched in either their field of study or with a particular program's structure and culture (Golde, 2005).

Finally, businesses and other organizations have reported a gap in the leadership skills needed in the workplace and the leadership readiness of recent graduates (Eberhardt et al., 1997; Schwartz et al., 2014). In particular, research found that ethical leadership influenced innovative work behaviors and helped build positive workplace relationships (Marsh, 2013; Yidong & Xinxin, 2013).

CHAPTER III

METHODOLOGY

Introduction

According to the U.S. Census Bureau (2014), only 1.8% of the U.S. population has earned a doctoral degree. The number of individuals who start a doctoral program is undoubtedly higher, as many researchers have documented high attrition rates from PhD and professional doctorate programs (Brill et al., 2014; Denecke et al., 2009; Smith et al., 2006). While most research concerning doctoral education has used samples that included students in doctoral programs or those who already hold a doctoral degree, little research exists that has sampled students in graduate programs, or those already holding a master's degree, in order to measure their interest in earning a doctoral degree.

In order to maximize the resources educational institutions make available for recruiting doctoral students, the following research measured interest in earning a doctoral degree among current graduate students and those already holding a master's degree. In addition, this research examined the features graduate students look for in a doctoral program, and the obstacles graduate students face in pursuing a doctoral degree. The four research questions examined were:

1. To what extent are master's degree students/graduates interested in pursuing a doctoral degree?

2. What features do master's degree students/graduates look for in a doctoral program?
3. What are the obstacles for master's degree students/graduates in pursuing a doctoral degree?
4. What factors predict interest in pursuing a doctoral degree, especially in the area of Leadership?

Research Design

In order to examine the four research questions above, and because the population of master's degree students and graduates is large numerically, scattered geographically, and diverse in fields of discipline, the researcher chose to use an applied research design with a quantitative, anonymous survey. The researcher distributed the survey instrument to a large convenience sample.

Gay, Mills, and Airasian (2012) wrote that applied research is useful "in solving practical problems" (p. 16). The practical problem this research investigated is how to predict which master's degree student or graduate is most likely to pursue a doctoral degree. A quantitative approach is useful for measuring relationships and making predictions (Leedy & Ormrod, 2013). This research looked at relationships between doctoral degree program features and obstacles, and analyzed which variables best predicted interest in earning a doctoral degree. Anonymity assured respondents of their privacy and minimized any potential harm (Gay et al.). The researcher chose convenience sampling in order to find institutions willing to distribute the survey on behalf of the researcher.

The researcher developed a survey instrument that combined questions adapted from previously published research along with newly developed questions. Almost all of the survey questions used a Likert scale. According to Salkind (2012), Likert scales are widely used to assess attitudes. The only questions not using a Likert scale were an initial question used to verify that the respondent met the qualifications of the study, five questions that asked if the respondent wanted to add another item to the immediately preceding set of questions, and five demographic questions. See Appendix A for a copy of the survey instrument.

Two PhD's in the field of sociology and two EdD's in the field of education reviewed the survey instrument. In addition, the researcher conducted a pilot test using six master's degree students and graduates. The students and graduates completed the survey and then discussed any issues concerning the survey with the researcher. Based on the feedback from these experts and the focus group, the researcher made several changes to the survey instrument.

The researcher placed the survey instrument online and several institutions then sent emails containing a link to the survey to eligible participants. The survey instrument started with a qualifying question in order to verify that the respondent met the qualifications of the study; that is, a master's degree student or graduate who has not yet started a doctoral program. If a respondent did not meet the survey criteria a notification appeared on screen and the respondent could no longer continue the survey. If a respondent did meet the survey criteria the survey instrument guided the respondent through the five sections described below.

The first section asked about the respondent's interest in three types of doctoral degrees, the Doctor of Business Administration (DBA), the Doctor of Education (EdD), and the Doctor of Philosophy (PhD). The researcher measured interest in these degrees using a 5-point Likert scale with the following response options: 1 (*no interest*), 2 (*a little interest*), 3 (*some interest*), 4 (*definite interest*) to 5 (*very high interest*). A final question in section one asked if the respondent was interested in some other type of doctoral degree, and if so, to write-in the name of the degree.

Section two of the survey was only for those participants who had *no interest* in any doctoral degree in section one. Using a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), this section contained five statements with reasons for why the respondent had no interest in any doctoral degree. A final question in this section asked the respondent if there was some other reason for their lack of interest in earning a doctoral degree.

Section three of the survey was for those participants who had expressed at least *a little interest* or higher to at least one of the doctoral degrees in section one. The first group of questions in this section asked about the field of study in which the student had an interest. Seven fields were presented that used a Likert scale ranging from 1 (*no interest*) to 5 (*very high interest*). Additionally, respondents had the option to write-in another field of interest if their field was not included in the list of seven provided.

The next set of items in section three measured respondents' attitudes toward earning a doctoral degree. There were 21 statements that used a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Most of these statements came from a study concerning students' attitudes toward MBA programs (Brewer & Brewer, 2012), and

were easily adapted for the current survey by replacing the MBA designation with the word doctoral. Additionally, the researcher of the current study added several attitudinal statements concerning ethics and leadership.

Another set of 20 items in section three measured respondents' preferences for certain features when considering a doctoral program. The researcher based many of these items from a study on recruiting students for doctoral programs in marketing (Davis & McCarthy, 2005). The questionnaire that Davis and McCarthy used was not included in their journal article; however, the current researcher used the results reported by Davis and McCarthy to develop questions using a Likert scale with the following response options: 1 (*not important*), 2 (*a little important*), 3 (*somewhat important*), 4 (*definitely important*), and 5 (*extremely important*). Additionally, the researcher developed items concerning the importance of attending a state university, a private university, and a religiously affiliated university, as well as a few factors based on the researcher's current doctoral program.

The final set of 17 items in section three measured reasons for (motivations), and reservations about (obstacles), their interest in pursuing a doctoral degree. A portion of a study by Forray and Goodnight (2014) concerned with recruiting minority students into business PhD programs was adapted for the current survey instrument. The response options for this set of items used the following 5-point Likert scale: 1 (*not at all true for me*), 2, 3 (*somewhat true for me*), 4, and 5 (*Very true for me*). Additionally, respondents had the option to indicate if they had another reason for pursuing a doctoral degree, as well as the option to indicate if they had another reservation about pursuing a doctoral degree, and if so, to write-in the reason and/or reservation.

Section four consisted of one open-ended question for anyone who responded to the initial, qualifying question that they were already in a doctoral program or had already earned a doctoral degree. This open-ended question brought value to the survey because it introduced the possibility of finding program features or obstacles that the survey instrument did not consider.

Section five of the survey asked five demographic questions including age, current work situation, current class-load, current field of study or work, and institution from which they received the survey invitation. These characteristics were important for describing differences in degree interest, attitudes, program preferences, motivations and obstacles. The demographic items were also important for predicting student interest in a particular degree or program feature.

The researcher obtained approval for the study from the ONU Institutional Review Board. Additionally, the researcher received approval from each of the institutions that helped facilitate the study. The researcher provided each institution with the text for an email that included a link to the survey, and each institution took responsibility for distributing emails to potential respondents that matched the criteria set forth by the researcher.

Concerning the questions that were adapted in order to develop the survey instrument used in this study, Brewer and Brewer (2012) granted their permission. The researcher conducted internet searches in an effort to contact Forray and Goodnight (2014), and Davis and McCarthy (2005); however, the researcher did not find contact information for them. Because Forray and Goodnight, and Davis and McCarthy did not use their questions as part of a scale within their published articles, and since the

researcher created a unique format for the questions adapted from their surveys, and because the researcher included additional questions, the researcher deemed adaptation of the Forray and Goodnight, and Davis and McCarthy questions as permissible.

Participants

The researcher obtained permission from seven universities in order to survey their master's degree students; however, only five universities actually distributed the survey. The researcher also obtained permission from the Church of the Nazarene Global Ministry Center in order to survey clergy who hold a master's degree but who have not yet earned a doctoral degree. The universities represented were a mix of public and private, religiously affiliated universities. Most of the universities were geographically located in the Kansas City metropolitan area; however, one was located in the Chicago metropolitan area, and one was located in Pennsylvania. Table 6 lists the institutions that participated, the number of surveys each institution emailed (if known), the number of respondents who indicated they had an affiliation with that institution, and the response rate from the institution (if known).

Table 6

Respondents by Institution

Institution Name	# of Emails Sent	# of Respondents Indicating Affiliation	Response Rate
Avila University	Unknown	36	
Church of the Nazarene	909	165	18.2%
MidAmerica Nazarene University	507	51	10.1%
Nazarene Theological Seminary	None	67	
Olivet Nazarene University	2,888	502	17.4%
Penn State University	Unknown	42	
Other Institutions Written In	None	18	
No response (missing)		53	
Total		934	

Data Collection

The researcher used SurveyGizmo.com to place the survey instrument online. SurveyGizmo.com included the necessary survey logic so that respondents who had no interest in pursuing any doctoral degree received only the questions appropriate for them. The researcher sent participating institutions a cover message inviting students to complete the survey. The institutions then emailed the survey invitation to those meeting the participant criteria during the 2016 Fall semester. The email included a link to the survey and promised anonymity to the respondents.

In order to increase the response rate, the researcher offered an incentive to respondents who completed the survey; the chance to win one of three \$100 gift cards

redeemable at Amazon.com. In order to do this, and to keep the survey anonymous, the researcher added a link to the final *Thank you* page of the survey. This link redirected the respondent to a separate form where the respondent could enter his or her first name and their email address for the drawing.

Since the researcher developed a new survey instrument, the researcher conducted reliability tests using Cronbach's alpha. Cronbach's alpha is useful for checking the internal consistency of a set of questions that use a Likert scale format (Gay et al., 2012). Yockey (2016) wrote that a coefficient alpha of .90 and above is excellent, .80 to .89 is good, .70 to .79 is fair, .60 to .69 is marginal, and .59 and below is poor.

For the set of five questions in section two of the survey instrument, which were only answered by those indicating *no interest* in any doctoral degree, Cronbach's alpha was .479. By removing the question "A doctorate is unnecessary considering my vocation" from this set of questions, Cronbach's alpha increased to .529; however, this result still indicated that this set of questions was not internally consistent. For the set of 58 questions in section three of the survey instrument, which were only answered by those indicating at least *a little interest* in any doctoral degree, Cronbach's alpha was .857. This indicated a good degree of reliability for the questions in section three. Furthermore, the questions in section three of the survey instrument were broken into four subsections. Subsection three had a good degree of internal consistency, and subsections two and four had a fair degree of internal consistency. Subsection one had a marginal degree of internal consistency. The number of cases in section three and within the subsections differs slightly because of missing data for some respondents. Table 7 shows the results for the reliability tests.

Table 7

Reliability Test Results

Survey Section	# of		Cronbach's		
	Items	<i>n</i>	<i>M</i>	<i>SD</i>	α
Section 2 (for those with <i>no interest</i> in any doctoral degree)	5	187	16.75	3.15	.479
Section 3 (for those with at least <i>a little interest</i> in any doctoral degree)	58	648	201.38	21.25	.857
Subsection 1 (attitudes toward degree)	21	702	74.42	7.50	.607
Subsection 2 (program preferences)	20	691	69.97	9.24	.792
Subsection 3 (motivations for degree)	11	693	37.06	9.00	.865
Subsection 4 (obstacles to degree)	6	692	20.22	4.70	.727

Analytical Methods

The researcher used SPSS Statistics to analyze the survey data. In order to analyze research question 1, “To what extent are master’s degree students/graduates interested in pursuing a doctoral degree?” the researcher used descriptive statistics (frequencies, means, and standard deviations) and chi-square tests on the questions found in sections one, two and five of the survey instrument.

In order to analyze research question 2, “What features do master’s degree students/graduates look for in a doctoral program?” the researcher used descriptive statistics (frequencies, means, and standard deviations) to examine a group of questions found in section three of the survey instrument. In addition, the researcher ran chi-square tests between the same group of questions in section three and the types of degrees in

section one, as well as the demographic items in section 5, in order to determine if certain program features were associated with a particular degree or demographic characteristic.

In order to analyze research question 3, “What are the obstacles faced by master’s degree students/graduates in pursuing a doctoral degree?” the researcher used descriptive statistics (frequencies, means, and standard deviations) to examine another group of questions found in section three of the survey instrument. In addition, the researcher ran chi-square tests between the same group of questions in section three and the degrees in section one, as well as the demographic items in section 5, in order to determine if certain obstacles were associated with a particular degree or demographic characteristic.

In order to analyze research question 4, “What factors predict interest in pursuing a doctoral degree, especially in the area of leadership?” the researcher used a multiple regression analysis to examine which variables from sections three and four of the survey instrument best predicted student interest in pursuing any of the doctoral degrees in section one. The researcher used another multiple regression analysis to examine which variables from sections two of the survey instrument best predicted *no* student interest in pursuing a doctoral degree. The researcher used a third multiple regression analysis to examine which variables best-predicted student interest in earning a doctoral degree in the area of Leadership.

Limitations

The researcher identified several limitations for this study. The first limitation was the difficulty the researcher encountered when seeking the cooperation of state universities. The researcher approached several state universities, all of which replied that their universities have policies in place prohibiting research among their students unless

the researcher has an affiliation with the institution. The result was that only one state university participated, and that participation was very limited. Therefore, the ability to generalize the findings of this study to students at state universities is limited.

A second limitation is that only a few fields of study—business, education, healthcare, and religion/theology—contained enough responses in order to analyze those fields as separate categories. Therefore, the ability to generalize the findings of this study to students in other fields such as computer science, history, and psychology, is limited.

Another limitation is that there is no way in knowing which of the survey respondents will actually enroll in a doctoral program sometime in the future. Although this study is measuring interest in earning a doctoral degree, a longitudinal study that tracks which respondents enroll in a doctoral program would greatly enhance the results of this research. The anonymous nature of this study prevents the possibility of a longitudinal study, and therefore limits the researcher's ability to see if interest in a doctoral degree now leads to actual enrollment sometime in the future.

A final limitation is that most of the respondents either attended a Nazarene university or were clergy in the Church of the Nazarene. Although many of the students attending Nazarene universities are not members in the Church of the Nazarene, the generalizability of the results to students in other religiously affiliated universities may be limited.

Summary

In order to measure the interest in earning a doctoral degree among current master's degree students and master's degree graduates, the researcher designed a quantitative, anonymous survey, and distributed the survey to a large convenience

sample. The survey used Likert scales for most of the questions because Likert scales are widely used to assess attitudes (Salkind, 2012). The data was analyzed using descriptive statistics, chi-square tests and multiple regressions. Chapter IV contains the results of these analytical procedures.

CHAPTER IV

FINDINGS AND CONCLUSIONS

Introduction

This study examined the extent to which master's degree students and graduates were interested in earning a doctoral degree. Universities have limited resources for advertisement and the recruiting of doctoral students. Knowing the characteristics of those most interested in earning a doctoral degree is helpful for administrators making decisions about where to place advertisement and recruiting resources. The literature review suggested that doctoral students looked for programs structured in such a way that the student can fit the program into his or her life. Therefore, the survey instrument used for this study tried to measure both the level of interest in earning a doctoral degree, as well as factors that would hinder or help earning a doctoral degree. Master's degree students and graduates at four universities, one seminary, and one religious organization received the survey instrument. The hope was that university administrators could use this study as they design future doctoral programs, and recruit future doctoral students. Therefore, the four research questions that guided this study were:

1. To what extent are master's degree students/graduates interested in pursuing a doctoral degree?
2. What features do master's degree students/graduates look for in a doctoral program?

3. What are the obstacles for master's degree students/graduates in pursuing a doctoral degree?
4. What factors predict interest in pursuing a doctoral degree, especially in the area of Leadership?

After reviewing various frequencies and crosstabs, the researcher determined that respondents associated with the Church of the Nazarene or NTS were somewhat different from those associated with one of the universities; therefore, the researcher organized respondents into two groups. One group included those associated with the Church of the Nazarene or NTS, and another group for those associated with one of the universities. Table 8 summarizes the demographic information using these groups. The data revealed that most respondents (71.8%) were 30 years of age or older; however, those who indicated that they were associated with the Church of the Nazarene or NTS tended to be older than those associated with universities. For example, 37.5% of those associated with the Church of the Nazarene or NTS reported being age 50 or older, compared to 12.7% for those associated with the universities in the study.

When asked, "Which best describes your current work situation?" 3.8% were currently not working, 13.1% were working part-time, and 83.2% were working full time. The difference between those associated with the Church of the Nazarene or NTS, when compared to those associated with one of the universities, was not as large as was the difference in age. However, of those associated with the Church of the Nazarene or NTS, 89.1% reported working full-time, compared to 81.2% for those associated with one of the universities in the study.

When asked, “Which best describes your current class-load?” 50.8% were not currently taking classes, 19.5% were taking classes part-time, and 29.7% were taking classes full-time. Those associated with the Church of the Nazarene or NTS were less likely to be taking classes full-time when compared to those associated with universities (3.9% and 38.7%, respectively). Interestingly, 21.3% of all respondents reported working full-time and taking classes full-time.

Table 8

Demographics of Study Participants

	<i>n</i>	Overall	Naz/NTS	Universities
Age				
Under 25	44	5.0%	1.3%	6.3%
25 to 29	204	23.2%	7.8%	28.7%
30 to 39	288	32.7%	32.3%	32.9%
40 to 49	175	19.9%	21.1%	19.4%
50 or older	169	19.2%	37.5%	12.7%
Current work situation				
Not currently working	33	3.8%	3.5%	3.9%
Working part-time	114	13.0%	7.4%	15.0%
Working full-time	731	83.3%	89.1%	81.2%
Current class-load				
Not currently taking classes	449	51.0%	88.4%	37.6%
Taking classes part-time	172	19.5%	7.8%	23.7%
Taking classes full-time	260	29.5%	3.9%	38.7%
Current Field				
Business	60	6.8%	2.6%	8.3%
Education	214	24.3%	7.8%	30.2%
Healthcare	202	23.0%	0.9%	30.9%
Religion/Theology	228	25.9%	64.7%	12.0%
All other fields	176	20.0%	24.1%	18.5%

Findings

The researcher chose to divide the following section with subheadings. The subheadings signal a transition from one research question to the next. In doing the analysis for each research question, the researcher found more variables that were statistically significant than were included in this document. The researcher chose not to include a statistically significant finding based on one of the following reasons: a) the differences were small, or b) the researcher believed that the differences lacked theoretical value.

Interest in Earning a Doctoral Degree

The first research question asked, “To what extent are master’s degree students/graduates interested in pursuing a doctoral degree?” To answer this research question the researcher examined the survey item, “How interested are you in earning any of the following types of doctoral degrees?” This question listed three types of doctoral degrees: a) the DBA, b) the EdD, and c) the PhD, with responses ranging from *no interest*, *a little interest*, *some interest*, *definite interest*, and *very high interest*. Additionally, the questionnaire asked, “Do you have an interest in earning any other type of doctoral degree?” to which respondents could reply *yes* or *no*.

Overall, 20.0% ($n=187$) had *no interest* in any type of doctoral degree, and 80.0% ($n=747$) had at least *a little interest* in some type of doctoral degree. In addition, 25.3% ($n=236$) had either a *definite interest* or *very high interest* in at least one of the DBA, EdD, or PhD degrees. Concerning interest in the DBA, 72.3% had *no interest*, while 6.1% had either *definite interest* or *high interest*. Concerning interest in the EdD, 49.4% had *no interest*, while 10.5% had either *definite interest* or *high interest*. Concerning

interest in the PhD, 61.6% had *no interest*, while 15.7% had either *definite interest* or *high interest*. Additionally, 38.1% indicated *yes*, that they had interest in some other type of doctoral degree. Figure 1 shows the level of interest in each type of doctoral degree.

A chi-square analyses revealed no statistical significance in the level of interest for earning the DBA or EdD by the age of the respondent; however, age was statistically significant for the level of interest in earning a PhD, $\chi^2(16, N = 882) = 34.718, p = .004$. Figure 2 shows that those under the age of 25 are much more likely to have a *very high interest* in earning a PhD than those who are older than 25.

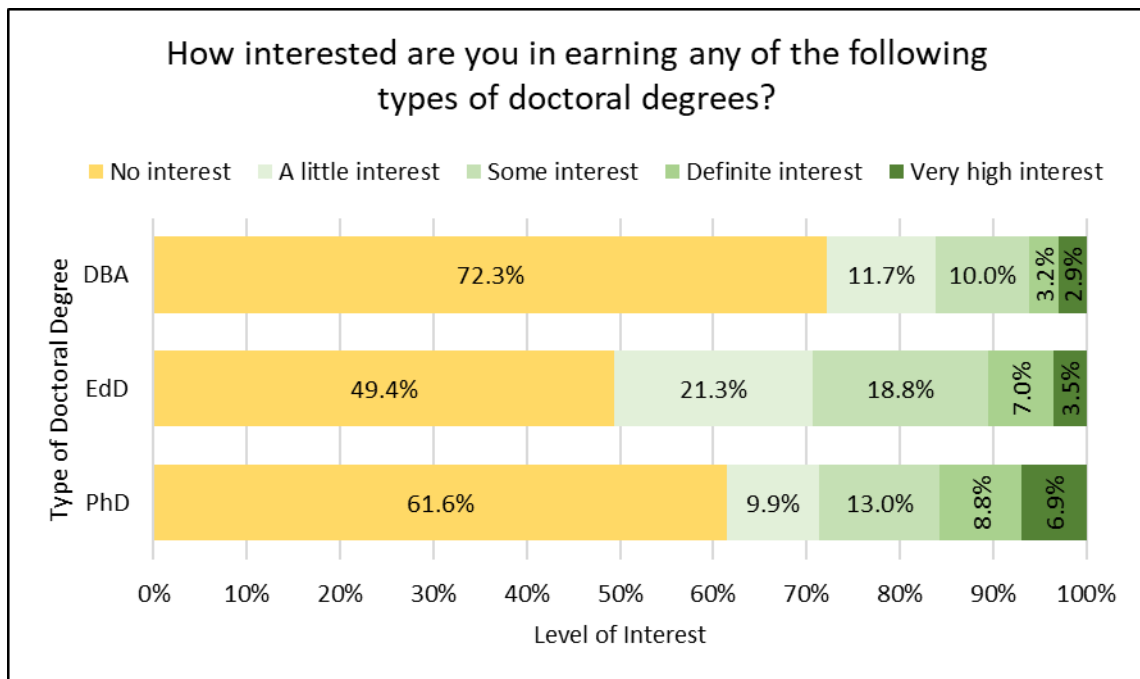


Figure 1. Interest in doctoral degree, by type of degree.

A chi-square analyses revealed no statistical significance in the level of interest for earning the DBA or EdD by these organizational groupings; however, organizational association was statistically significant for the level of interest in earning a PhD, $\chi^2(4, N = 881) = 56.086, p = .000$. Figure 3 shows that those associated with the Church of the

Nazarene or NTS are more likely to have a *definite interest* or *very high interest* in earning a PhD than those associated with a university.

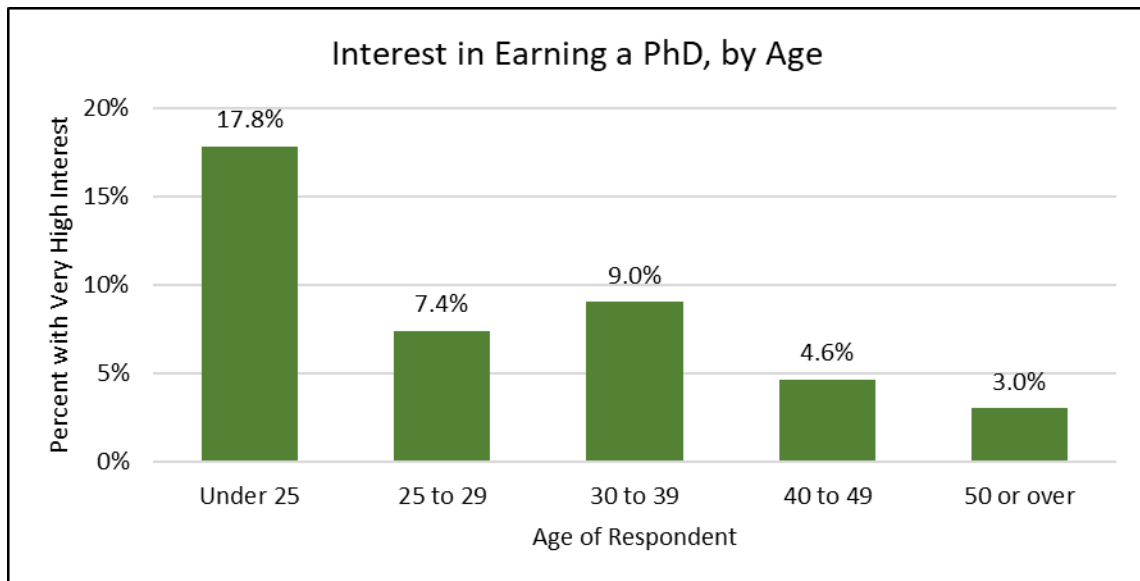


Figure 2. Very high interest in a PhD, by age.

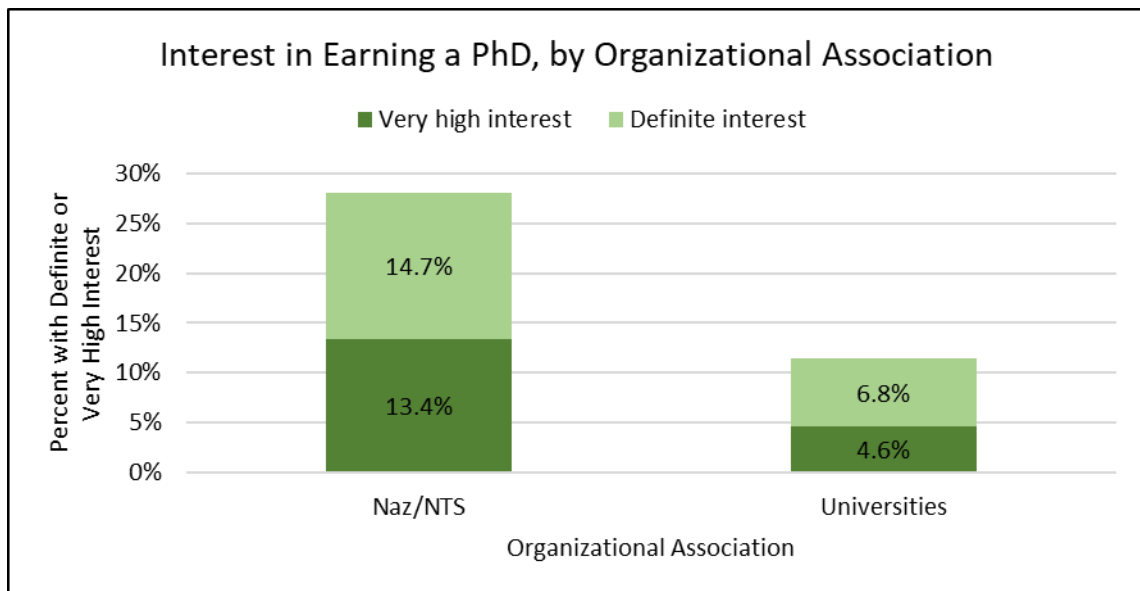


Figure 3. Definite or very high interest in a PhD, by organizational association.

Interest in a particular type of doctoral degree varied by the current field of the respondent. Interest in the DBA was more likely among those currently in the field of business (20.0% *definite interest*, and 16.7% *very high interest*), $\chi^2(16, N = 882) =$

182.504, $p = .000$. No other field had a combined *definite interest* and *very high interest* in the DBA of more than 7.3%. Interest in the EdD was more likely among those currently in the field of education (12.1% *definite interest*, and 8.4% *very high interest*), $\chi^2(16, N = 882) = 114.115, p = .000$. No other field had a combined *definite interest* and *very high interest* in the EdD of more than 10.0%. Interest in the PhD was highest among those in fields other than business, education, healthcare, and religion/theology (11.8% *definite interest*, and 11.2% *very high interest*). This was followed closely by those in the field of religion/theology (12.3% *definite interest*, and 10.1% *very high interest*), and then by those in the field of business (11.7% *definite interest*, and 5.0% *very high interest*), $\chi^2(16, N = 882) = 70.442, p = .000$. Table 9 shows the level of *no interest* and *definite/very high interest* for each type of doctoral degree by current field.

Table 9

Interest in Type of Doctoral Degree by Respondent's Current Field

Current Field	<i>n</i>	DBA		EdD		PhD	
		No	Def./VH	No	Def./VH	No	Def./VH
		Int.	Int.	Int.	Int.	Int.	Int.
Business	60	21.7%	36.7%	61.7%	10.0%	68.3%	16.7%
Education	214	85.5%	0.5%	22.4%	20.5%	72.0%	11.7%
Healthcare	202	79.7%	2.5%	67.3%	3.0%	75.7%	6.5%
Religion/Theo.	228	77.2%	4.4%	56.6%	7.4%	45.6%	22.4%
Other Fields	178	63.5%	7.3%	50.6%	9.6%	51.1%	23.0%
Total	882	73.2%	5.7%	49.9%	10.2%	61.6%	15.8%

Note. Def./VH combines the percentages for *definite interest* and *very high interest*.

When respondents were asked if they had an interest in a doctoral degree other than the DBA, EdD, and PhD, 61.9% ($n=578$) replied *no*, and 38.1% ($n=356$) replied *yes*. Of those that replied *yes*, the most common degrees written-in were the Doctor of Ministry (DMin), listed by 111 respondents (11.9% of the total sample), and the Doctorate of Nursing Practice (DNP), listed by 103 respondents (11.0% of the total sample). No other doctoral degree was written-in more than 19 times. Of those who wrote-in that they had an interest in the DMin, 78.3% were currently in the field of religion/theology. Of those who wrote-in that they had an interest in the DNP, 88.7% were currently in the field of healthcare.

Respondents who indicated at least *a little interest* in any type of doctoral degree were asked how interested they would be in earning a doctoral degree in several different fields of study. The field of study that received the most interest was *Leadership*, where 26% ($n=191$) indicated either a *definite interest* or a *very high interest*. The field of *Religion/Theology* received the next most interest, with 23.1% ($n=170$) indicating either a *definite interest* or a *very high interest*. The fields of *Education* and *Nursing Practice* both received 15.6% ($n=114$) of respondents indicating either a *definite interest* or *very high interest*. Of the other fields listed (*Computer Science*, *History*, and *Psychology*) none had more than 9.4% of respondents indicate either a *definite interest* or *very high interest*.

The researcher ran a series of chi-square analyses between the level of interest in the field of *Leadership* and the levels of interest in the DBA, EdD, and PhD degrees. Each chi-square was statistically significant. Of the 54 people who indicated either a *definite interest* or *very high interest* in the DBA, 42 (77.8%) also had *definite interest* or *very high interest* in the field of *Leadership*, $\chi^2(16, N = 734) = 197.731, p = .000$. Of the

96 people who indicated either a *definite interest* or *very high interest* in the EdD, 60 (62.5%) also had *definite interest* or *very high interest* in the field of *Leadership*, $\chi^2(16, N = 734) = 190.419, p = .000$. Of the 114 people who indicated either a *definite interest* or *very high interest* in the PhD, 57 (39.6%) also had *definite interest* or *very high interest* in the field of *Leadership*, $\chi^2(16, N = 734) = 45.825, p = .000$. Figure 4 illustrates the level of interest in a doctoral degree in the field of *Leadership* for those who indicated either a *definite interest* or *very high interest* in the DBA, EdD, or PhD degrees.

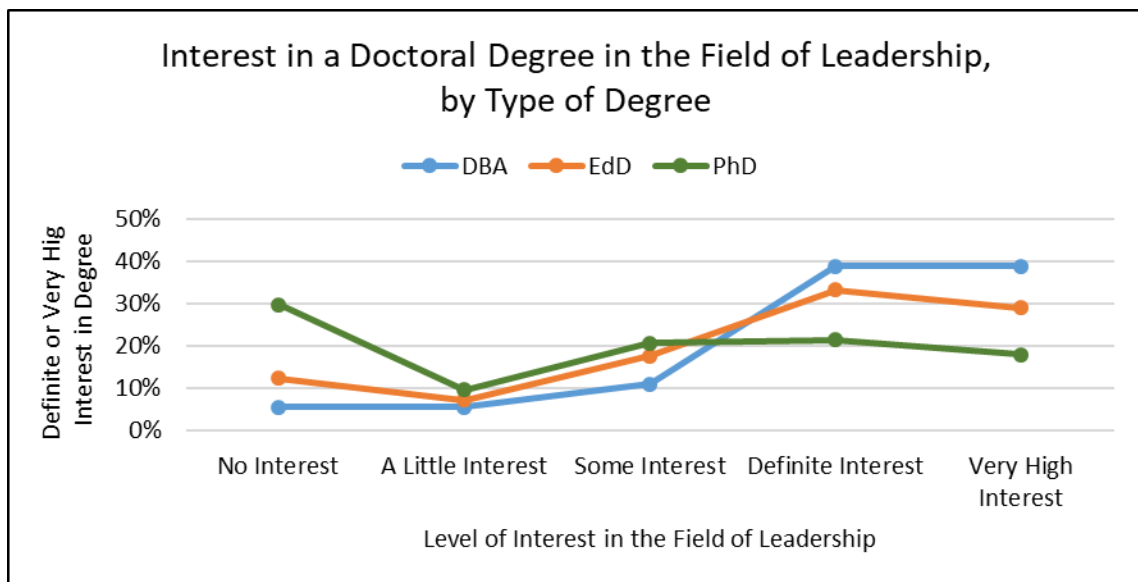


Figure 4. Interest in a doctoral degree in the field of leadership, by type of degree.

As previously noted, 187 (20.0%) respondents indicated *no interest* in any type of doctoral degree. Using a 5-point Likert scale where the response options were *strongly disagree*, *disagree*, *not sure/neutral*, *agree*, and *strongly agree*, these individuals responded to five statements concerning their lack of interest. Of those with *no interest* in any type of doctoral degree, more than three out of four *strongly agreed* (29.4%) or *agreed* (47.6%) that “A doctorate is too costly.” Slightly less than three out of four *strongly agreed* (30.5%) or *agreed* (41.2%) that “I do not have the time necessary to

complete a doctoral degree.” More than half *strongly agreed* (22.5%) or *agreed* (36.9%) that “I do not have the motivation necessary to complete a doctoral degree,” and more than half *strongly agreed* (16.6%) or *agreed* (37.4%) that “A doctorate is unnecessary considering my vocation.” However, when presented with the statement “I do not believe I have the academic ability necessary to complete a doctoral degree,” most *strongly disagreed* (34.8%) or *disagreed* (39.0%).

Features Looked for in a Doctoral Program

The second research question asked, “What features do master’s degree students/graduates look for in a doctoral program?” To answer this research question the researcher examined a series of 52 questions in the survey instrument: 21 questions concerning attitudes toward doctoral education, leadership and employment, 20 questions concerning preferences for doctoral education, and 11 questions concerning motivations for doctoral education.

Attitudes.

Figure 5 shows the level of agreement concerning attitudes toward doctoral education, leadership and employment for those items where more than half of the respondents either *strongly agreed* or *agreed* using a 5-point Likert scale. When asked about ethics, almost all respondents (97.7%) *strongly agreed* or *agreed* with the statement “Ethics are important in my vocational field,” and about three out of four (74.0%) *strongly agreed* or *agreed* with the statement “I would like to learn more about ethics.” In terms of leadership, 87.0% *strongly agreed* or *agreed* with the statement “I have a good understanding of my leadership style;” however, 81.9% also *strongly agreed* or *agreed* with the statement “I would like to learn more about leadership.”

Some of the statements that did not receive agreement from at least half of the respondents included, “I would prefer to obtain a doctoral degree entirely on-line” (*strongly agree* = 23.7%, and *agree* = 19.7%), “The long-term benefits of a doctoral degree outweigh the costs” (*strongly agree* = 10.7%, and *agree* = 26.0%), and “I would prefer to be a full-time doctoral student” (*strongly agree* = 6.6%, and *agree* = 17.5%). See Appendix A for complete list of items and frequencies.

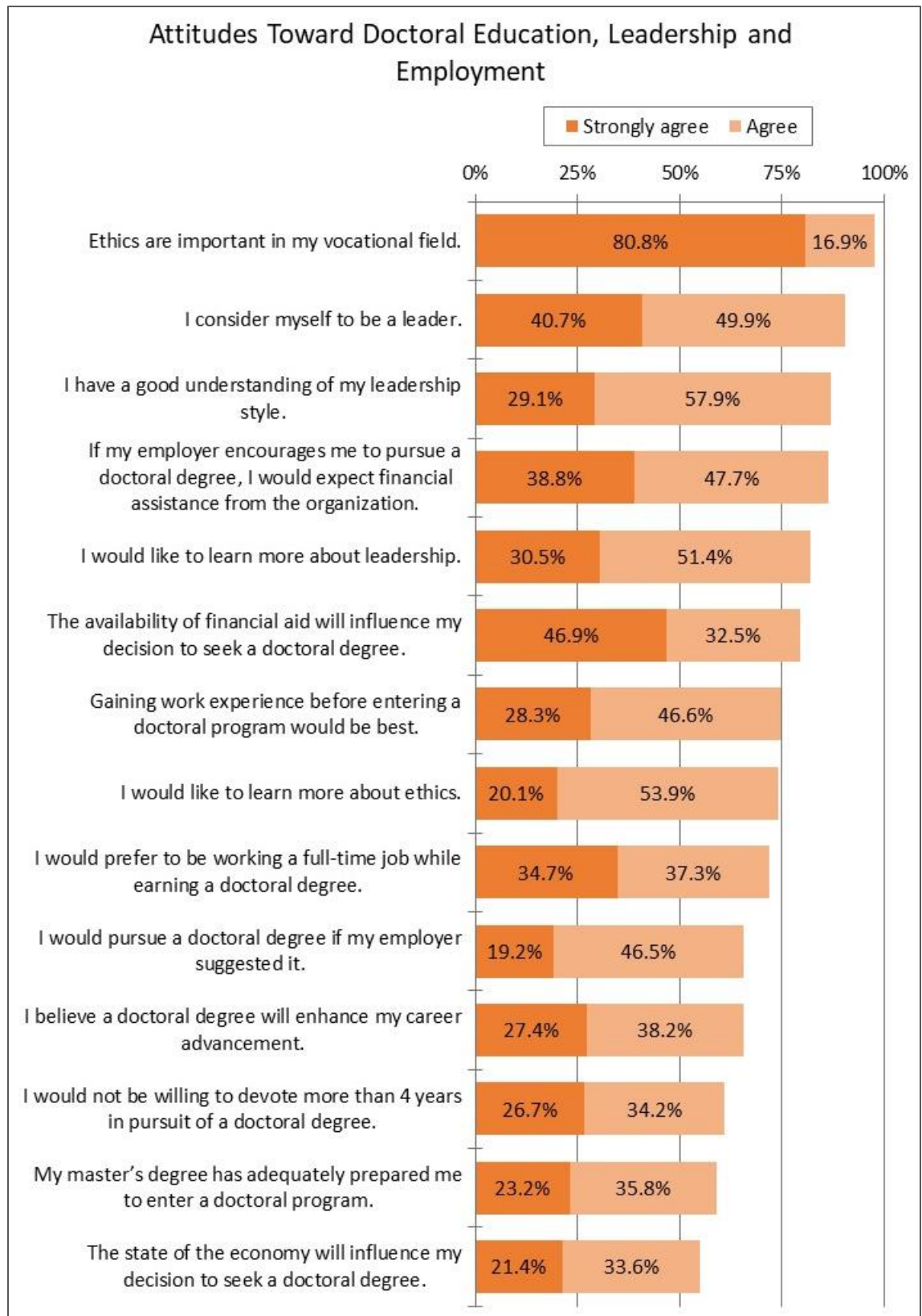


Figure 5. Attitudes toward doctoral education, leadership, and employment.

Chi-square analyses revealed that age was a factor in the responses to several of the survey statements concerning attitudes. For example, the older the respondent, the more likely the respondent was to *strongly agree* that, “Ethics are important in my vocational field,” $\chi^2(20, N = 692) = 57.117, p = .000$. On the other hand, younger respondents were more likely to *strongly agree* or *agree* that, “I would pursue a doctoral degree if my employer suggested it,” $\chi^2(20, N = 688) = 35.807, p = .016$. Younger respondents were also more likely to *strongly agree* or *agree* that, “I believe a doctoral degree will enhance my career advancement,” $\chi^2(20, N = 690) = 43.787, p = .002$.

Figures 6, 7 and 8 illustrate these relationships.

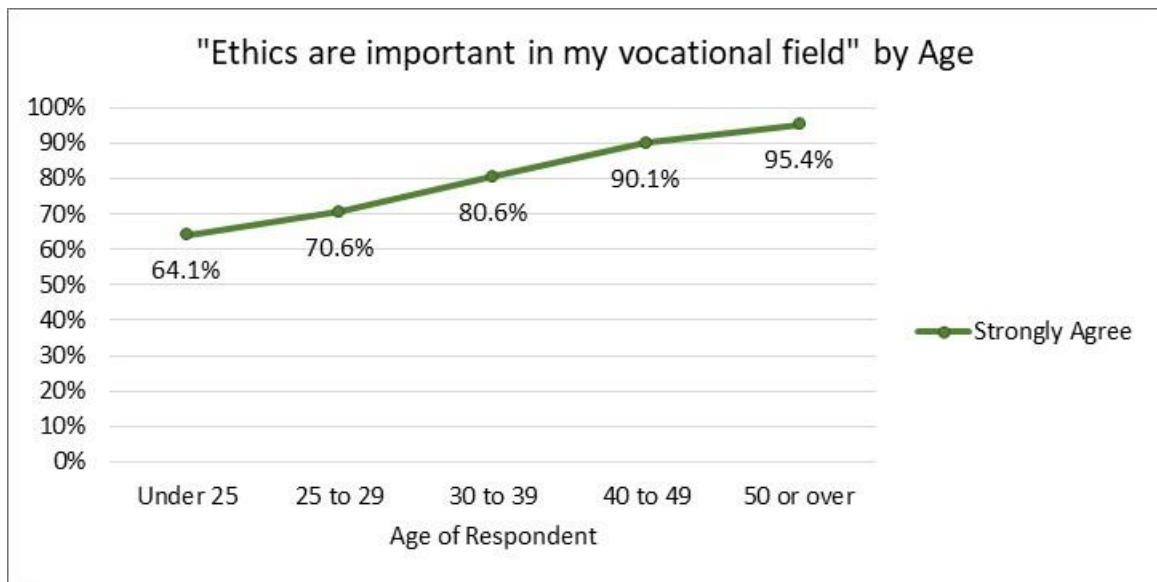


Figure 6. “Ethics are important in my vocational field” by age.

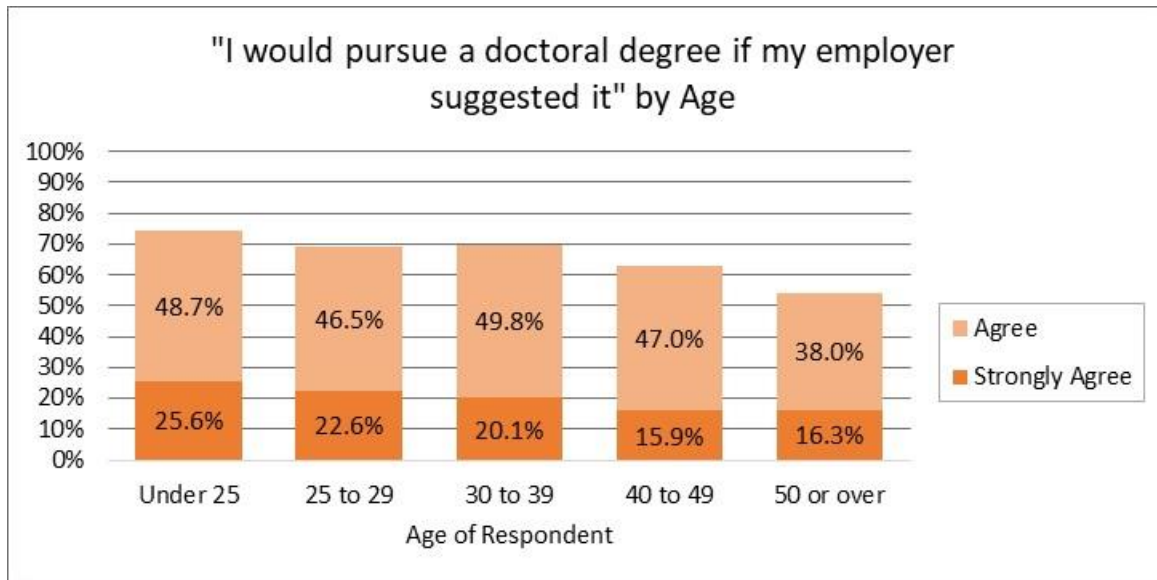


Figure 7. “I would pursue a doctoral degree if my employer suggested it” by age.

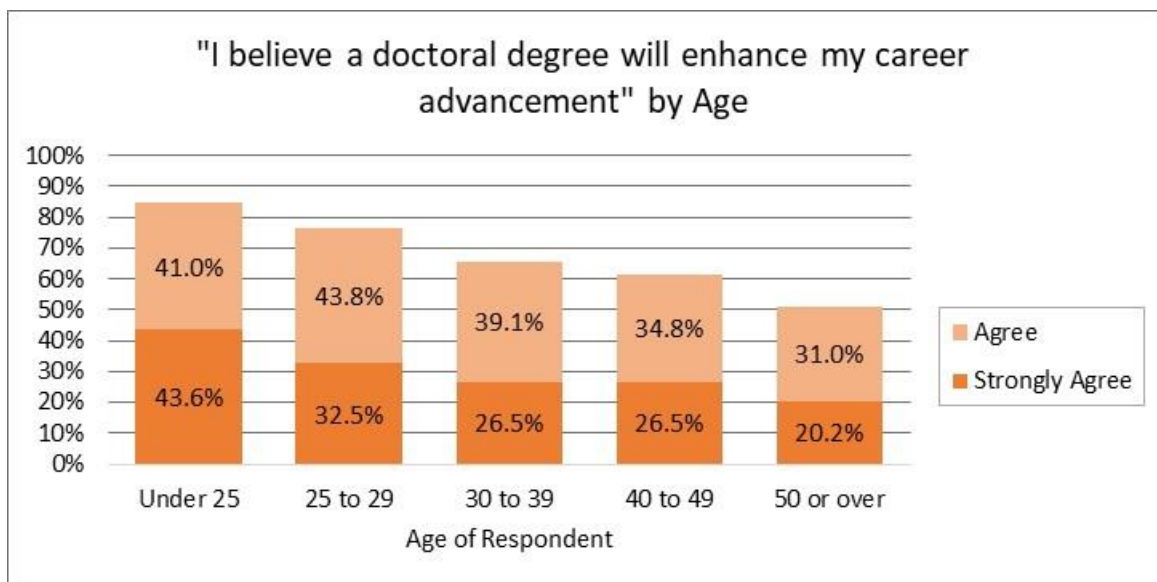


Figure 8. “I believe a doctoral degree will enhance my career advancement” by age.

In addition to the differences made by age, chi-square analyses revealed that the type of organization with which respondents were affiliated also influenced the responses to several of the survey statements concerning attitudes. When responding to the statement, “My master’s degree has adequately prepared me to enter a doctoral program,” those affiliated with the Church of the Nazarene or NTS were more likely to *strongly*

agree or *agree* (72.6%) than those affiliated with universities (54.5%), $\chi^2(5, N = 691) = 29.645, p = .000$.

Overall, 43.4% *strongly agreed* or *agreed* with the statement, “I would prefer to obtain a doctoral degree entirely on-line;” however, those affiliated with the Church of the Nazarene or NTS were less likely to *strongly agree* or *agree* (29.5%) with this statement than those affiliated with universities (49.3%), $\chi^2(5, N = 690) = 28.492, p = .000$. In addition, those affiliated with the Church of the Nazarene or NTS were less likely to *strongly agree* or *agree* (52.0%) with the statement, “I would not be willing to devote more than 4 years in pursuit of a doctoral degree,” than those affiliated with universities (64.1%), $\chi^2(5, N = 690) = 32.205, p = .000$.

Although most respondents *strongly agreed* or *agreed* (72.0%) with the statement, “I would prefer to be working a full-time job while earning a doctoral degree,” those affiliated with the Church of the Nazarene or NTS were less likely to *strongly agree* or *agree* (59.7%) with this statement than those affiliated with universities (77.3%), $\chi^2(5, N = 691) = 36.646, p = .000$. In addition, those affiliated with the Church of the Nazarene or NTS were less likely to *strongly agree* or *agree* (56.0%) with the statement, “I believe a doctoral degree will enhance my career advancement,” than those affiliated with universities (69.3%), $\chi^2(5, N = 689) = 16.753, p = .005$.

Chi-square analysis revealed differences in the respondents’ current fields and their level of agreement to the statements concerning attitudes toward earning a doctoral degree. Figure 9 illustrates these differences, $\chi^2(20, N = 692) = 53.472, p = .000$. Those in the field of Healthcare were most likely to *strongly agree* (36.4%) or *agree* (26.5%) that they prefer obtaining a doctoral degree entirely on-line. In fact, Healthcare was the

only field where more than 50% of respondents *strongly agreed* or *agreed* with this statement. Those in the field of Religion/Theology were least likely to *strongly agree* (17.4%) or *agree* (11.6%) that they would prefer obtaining a doctoral degree entirely on-line.

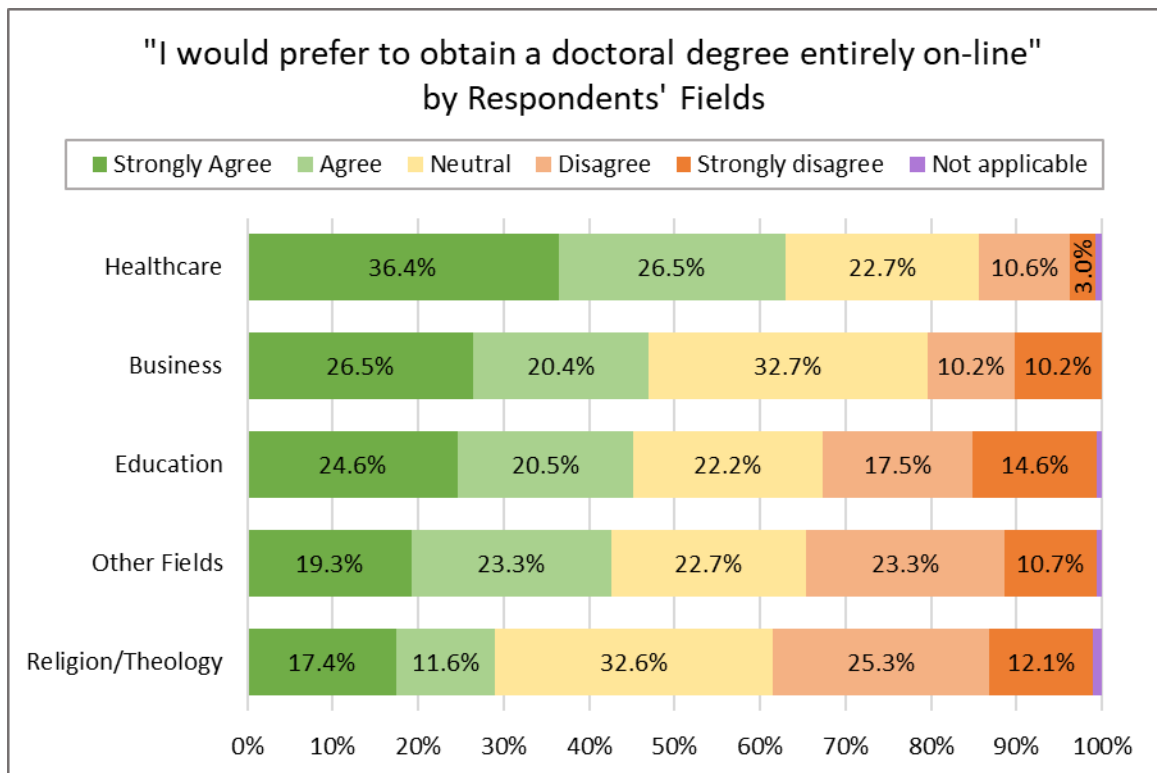


Figure 9. “I would prefer to obtain a doctoral degree entirely on-line” by respondents’ fields.

In addition to being the most likely to *strongly agree* that they prefer to obtain a doctoral degree entirely on-line, those in the field of Healthcare were also the most likely to *strongly agree* or *agree* (76.6%) with the statement, “I would not be willing to devote more than 4 years in pursuit of a doctoral degree.” Those in Other Fields were least likely to *strongly agree* or *agree* (49.3%) with this statement. Figure 10 illustrates the relationships in this chi-square analysis, $\chi^2(20, N = 692) = 48.046, p = .000$.

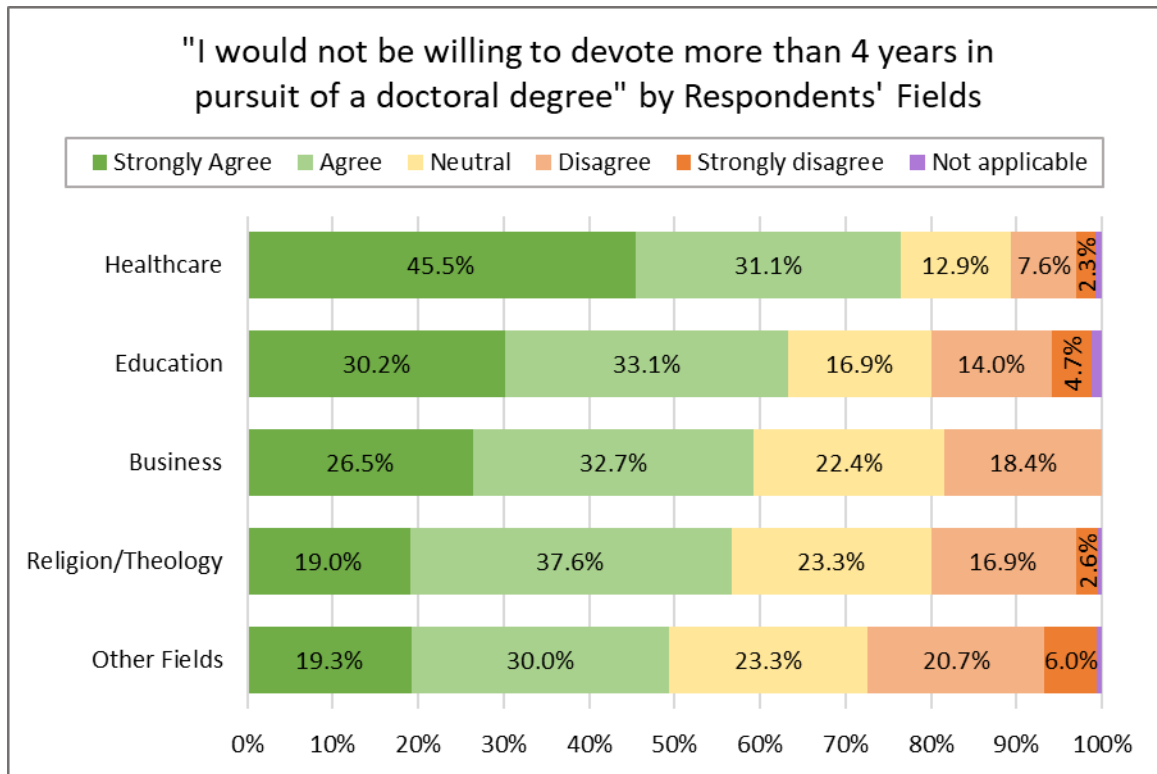


Figure 10. "I would not be willing to devote more than 4 years in pursuit of a doctoral degree" by respondents' fields.

Those in the field of Business were most likely to *strongly agree* or *agree* (78.0%) with the statement, "I believe a doctoral degree will enhance my career advancement," while those in the field of Religion/Theology were least likely to *strongly agree* or *agree* (52.3%) with this statement. In all fields, more than half of the respondents either *strongly agreed* or *agreed* that a doctoral degree would enhance their career advancement. Figure 11 illustrates the relationships in this chi-square analysis, $\chi^2(20, N = 692) = 42.647, p = .002$.

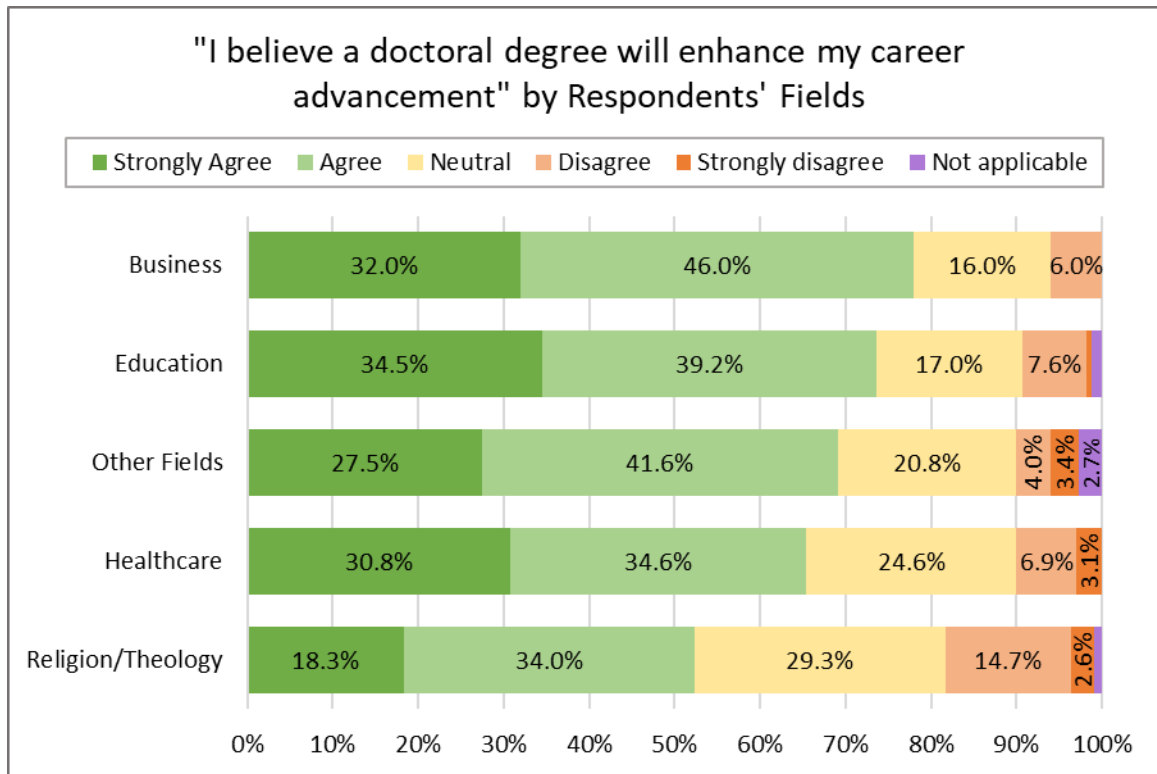


Figure 11. “I believe a doctoral degree will enhance my career advancement” by respondents’ fields.

Those in the field of Business were also more likely to *strongly agree* or *agree* (84.0%) with the statement, “I would pursue a doctoral degree if my employer suggested it,” while those in the field of Religion/Theology were least likely to *strongly agree* or *agree* (56.9%) with this statement. In all fields, more than half of the respondents either *strongly agreed* or *agreed* that they would pursue a doctoral degree if their employer suggested it. Figure 12 illustrates the relationships in this chi-square analysis, $\chi^2(20, N = 689) = 41.405, p = .003$.

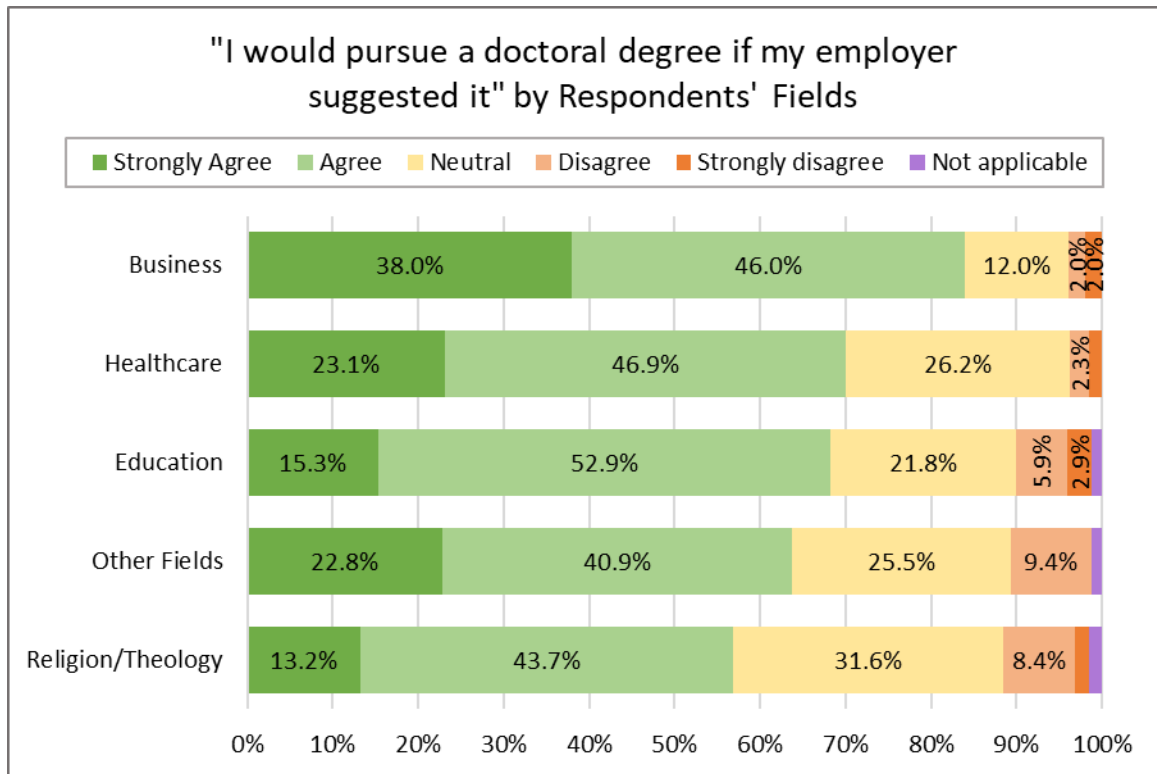


Figure 12. "I would pursue a doctoral degree if my employer suggested it" by respondents' fields.

Those in Other Fields were more likely to *strongly agree* or *agree* (83.3%) with the statement, "I would like to learn more about ethics," followed closely by those in the field of Business (80.0%) and those in the field of Religion/Theology (78.5%). Those in the field of Education were least likely to *strongly agree* or *agree* (61.6%) with this statement; however, in all fields, more than 60% of the respondents either *strongly agreed* or *agreed* that they would like to learn more about ethics. Figure 13 illustrates the relationships in this chi-square analysis, $\chi^2(20, N = 695) = 34.650, p = .022$.

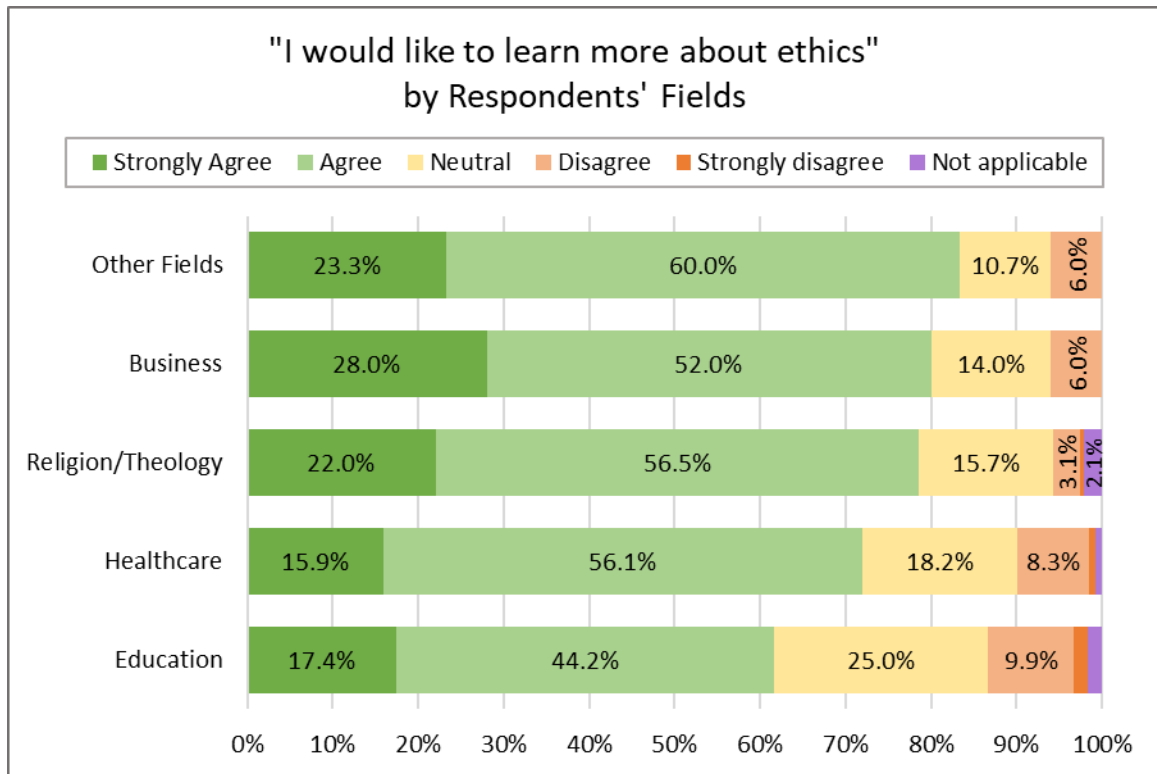


Figure 13. “I would like to learn more about ethics” by respondents’ fields.

Preferences.

Figure 14 shows the level of importance for a list of preferences related to doctoral education. Respondents rated these items using the following 5-point scale: *not important*, *a little important*, *somewhat important*, *definitely important*, and *extremely important*. The figure includes only those items where more than half of the respondents indicated the item was *extremely important* or *definitely important*. Overall, respondents indicated that the most important item was the “Availability of scholarships, grants or other financial aid,” with 90.9% reporting this as *extremely important* or *definitely important*. Other items that at least 3 out of 4 respondents reported as being either *extremely important* or *definitely important* were the “Financial cost of the program” (90.5%), “Faculty-to-student relationships” (80.2%), “The reputation of the faculty”

(80.0%), “The reputation of the university” (79.8%), and “Being able to work full-time” (75.2%).

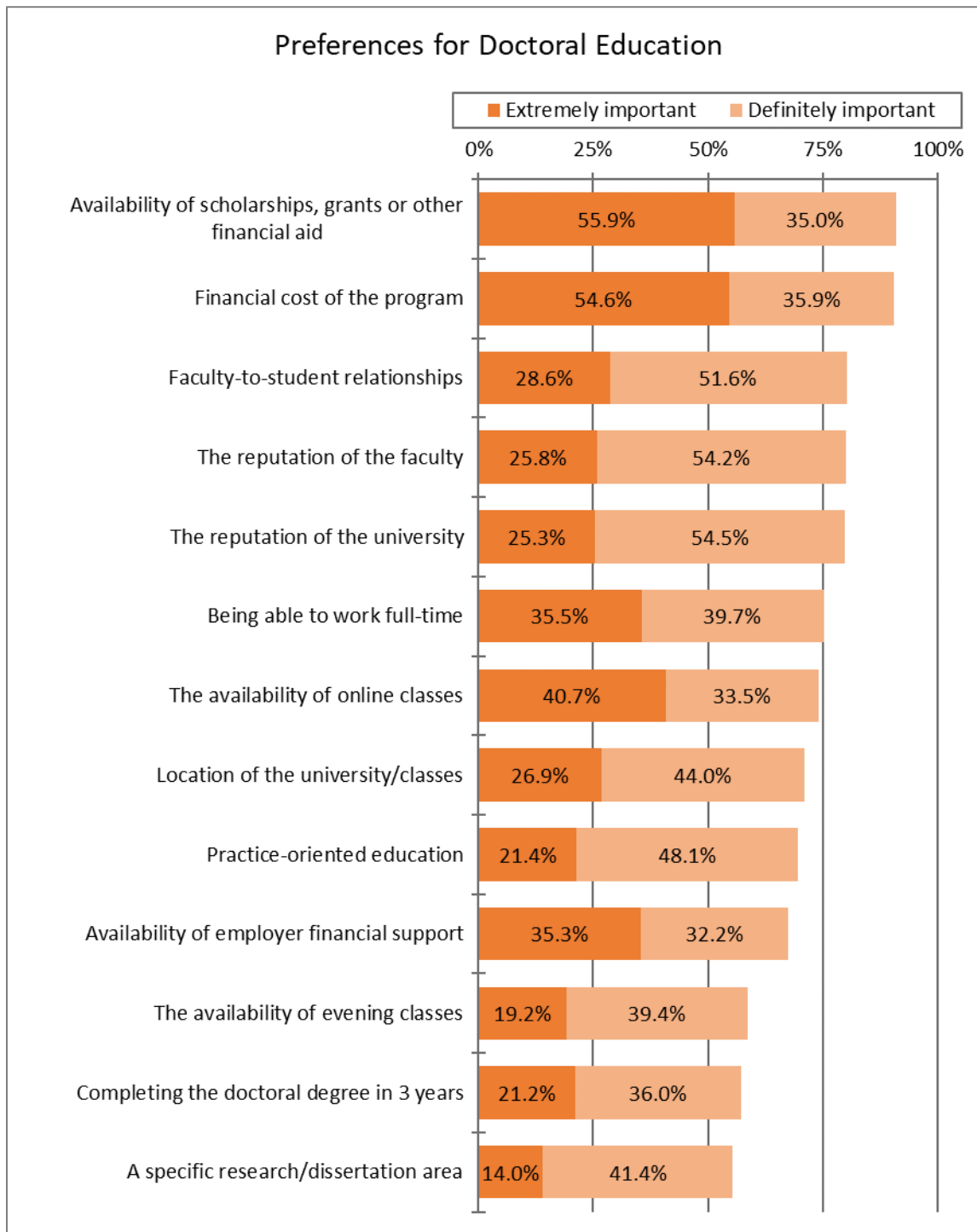


Figure 14. Preferences for doctoral education.

Items where less than half of the respondents reported that their preference was *extremely important* or *definitely important* included: “A cohort model” (44.7%), “Student-to-student relationships” (44.0%), “The availability of weekend classes” (41.5%), “Employment opportunities for my spouse” (37.0%), “Attending a religiously affiliated university” (27.5%), “Attending a private university” (9.2%), and “Attending a state university” (5.2%). See Appendix A for complete list of items and frequencies.

Chi-square analyses revealed that the respondent’s age influenced the level of importance for some preferences. One such preference was for online classes. Those under 25 years of age were much less likely to indicate that “the availability of online classes” was *definitely important* or *extremely important* (48.9%) when compared to other age groups, $\chi^2(16, N = 694) = 36.044, p = .003$. Figure 15 illustrates this relationship.

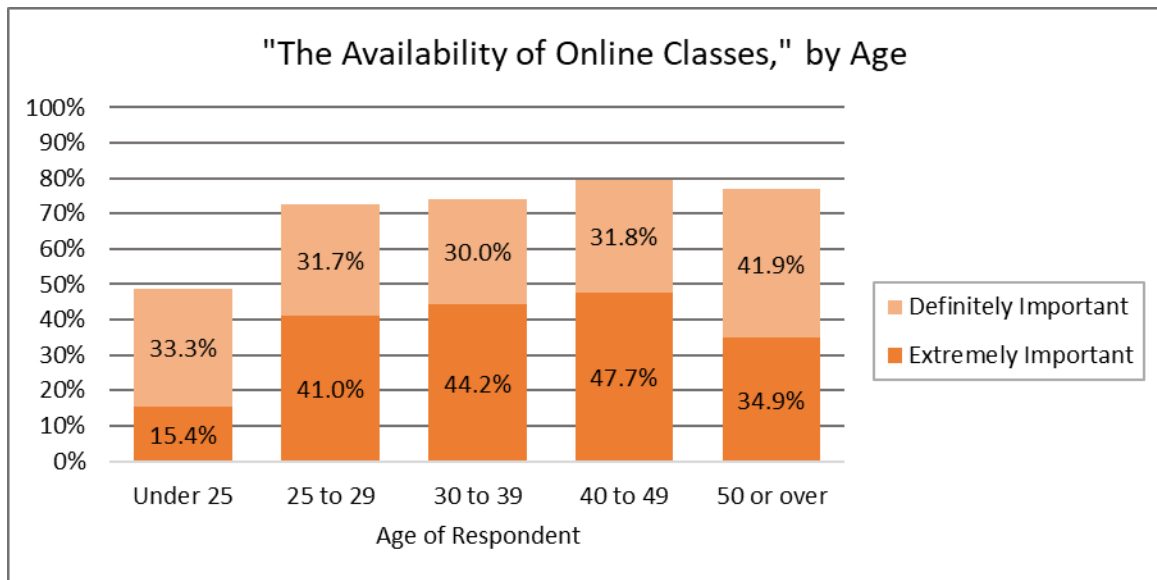


Figure 15. “The availability of online classes,” by age.

Another preference for which age influenced the level of importance had to do with “Attending a religiously affiliated university.” As age increased, so did the

percentage that indicated “Attending a religiously affiliated university” was either *extremely important* or *definitely important*, $\chi^2 (16, N = 693) = 78.417, p = .000$. Figure 16 illustrates this relationship.

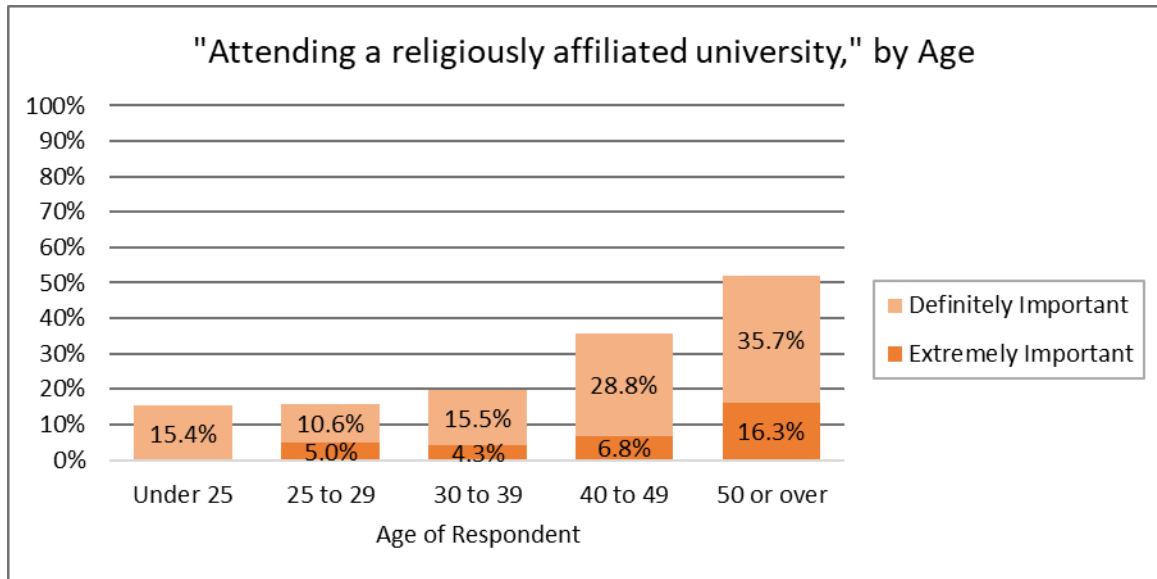


Figure 16. “Attending a religiously affiliated university,” by age.

In addition to the influence age had on the importance of “The availability of online classes,” respondents’ work situations also influenced the level of importance they reported for this preference. Those working full-time were more likely to report “The availability of online classes” as being *extremely important* or *definitely important* (76.5%) than were those working part-time (61.8%) or those not currently working (58.4%), $\chi^2 (8, N = 692) = 26.258, p = .001$. Figure 17 illustrates this relationship.

Chi-square analysis also revealed that those who were working full-time were more likely to report that “being able to work full-time” while pursuing a doctoral degree was *extremely important* or *definitely important* (79.7%) than compared to those working part-time (48.9%) or those not currently working (50.0%), $\chi^2 (8, N = 692) = 76.567, p = .000$. Figure 18 illustrates this relationship.

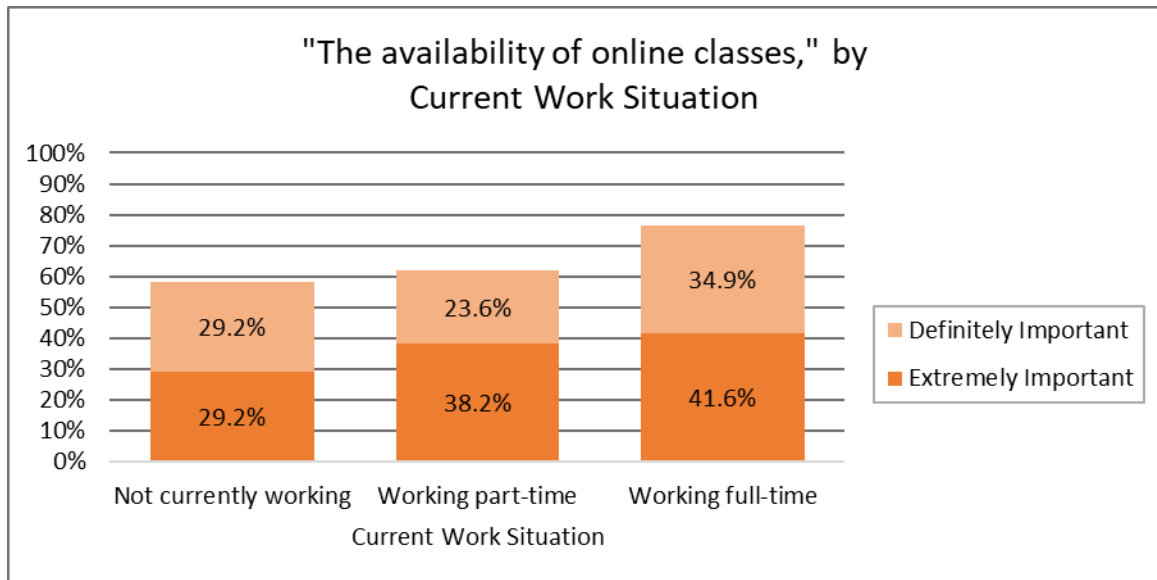


Figure 17. “The availability of online classes,” by current work situation.

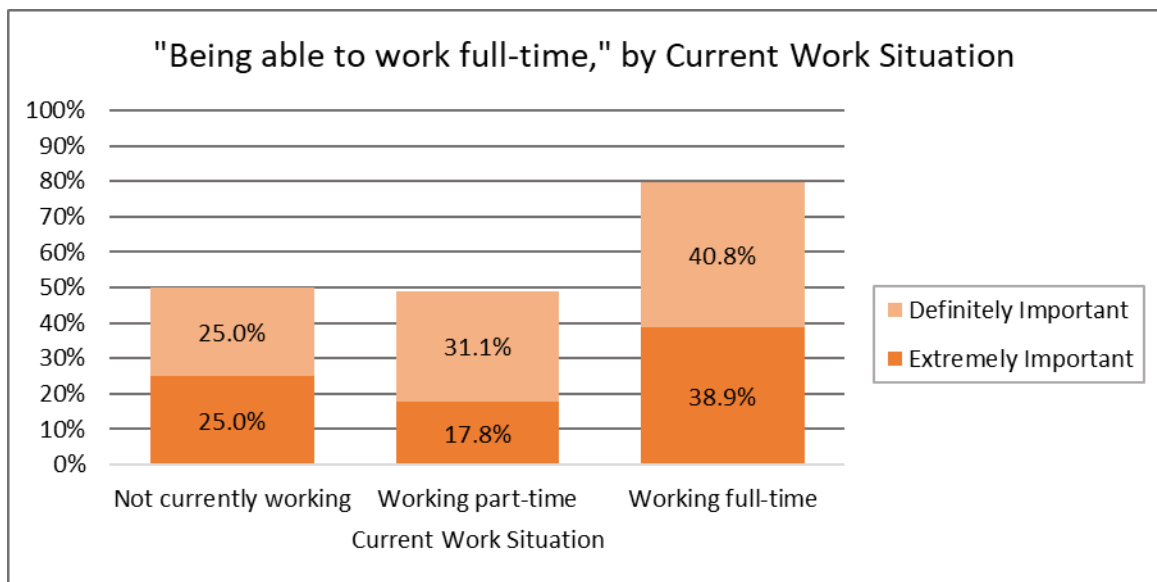


Figure 18. “Being able to work full-time,” by current work situation.

Not only did one’s current work situation affect some preferences, but one’s current class-load did as well. A chi-square analysis showed that “Completing the doctoral degree in 3 years” was *extremely important* or *definitely important* for 50.7% of those *not currently taking classes*, compared to 59.0% for those *taking classes part-time*, and 68.0% for those *taking classes full-time*, $\chi^2(8, N = 695) = 21.030, p = .007$. As

current class-load increased, so did the importance of completing the doctoral degree in three years. Figure 19 illustrates this relationship.

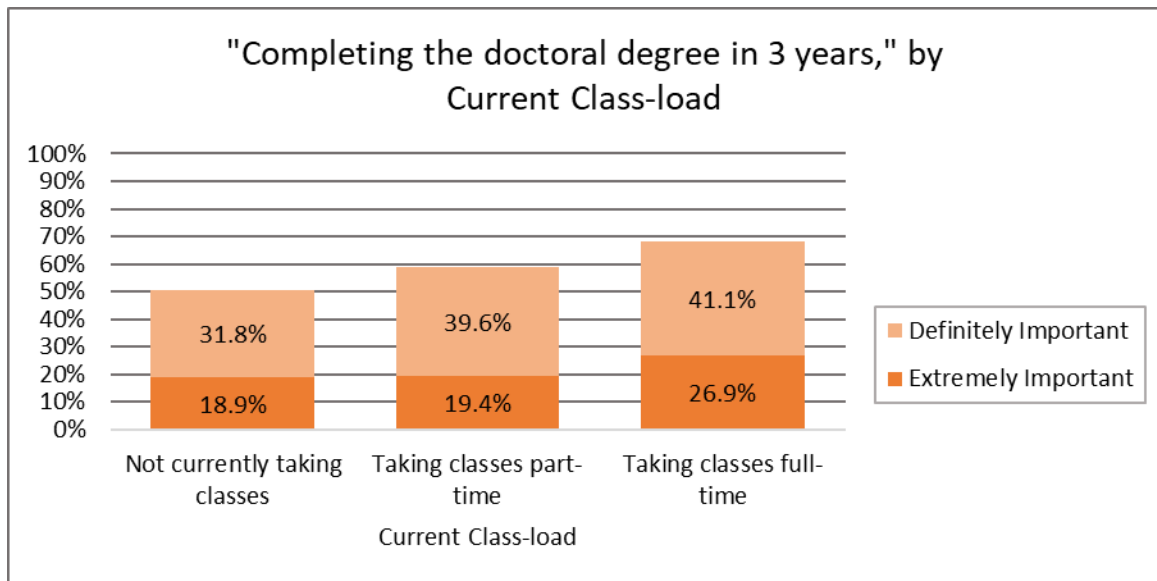


Figure 19. “Completing the doctoral degree in 3 years,” by current class-load.

As shown earlier in Figure 14, a higher percentage of all respondents reported “The availability of evening classes” to be *extremely important* or *definitely important* (58.6%) when compared to “The availability of weekend classes” being *extremely important* or *definitely important* (41.5%). Moreover, the importance of evening classes varied depending on current class-load. For those *not currently taking classes*, “The availability of evening classes” was rated as *extremely important* or *definitely important* 52.4% of the time, compared to 65.4% for those *taking classes part-time*, and 63.5% for those *taking classes full-time*, $\chi^2(8, N = 695) = 18.880, p = .016$. Figure 20 illustrates this relationship.

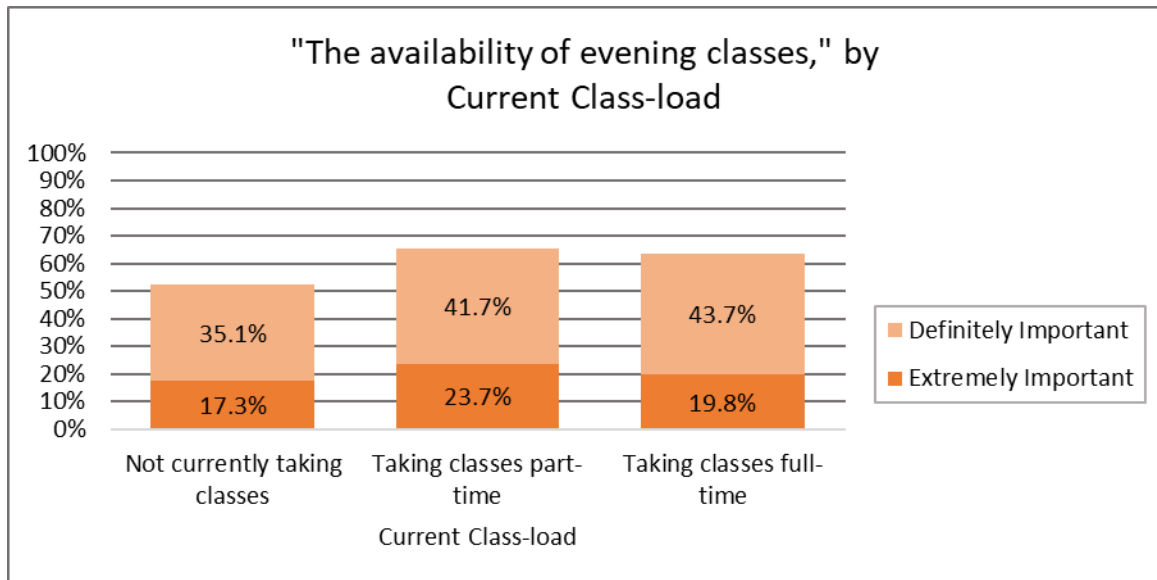


Figure 20. “The availability of evening classes,” by current class-load.

Chi-square analyses also revealed that the organizational affiliation of the respondents resulted in statistically significant differences. Those affiliated with the Church of the Nazarene or NTS were less likely to rate the “Location of the university/classes” as *extremely important* or *definitely important* (62.2%), than compared to those affiliated with universities (74.4%), $\chi^2 (4, N = 694) = 23.715, p = .000$. Those affiliated with the Church of the Nazarene or NTS were also less likely to rate the “The availability of weekend classes” as *extremely important* or *definitely important* (29.9%), than compared to those affiliated with universities (45.8%), $\chi^2 (4, N = 694) = 21.570, p = .000$. Although there is more overall interest in evening classes than weekend classes, those affiliated with the Church of the Nazarene or NTS were still less likely to rate the “The availability of evening classes” as *extremely important* or *definitely important* (43.2%), than compared to those affiliated with universities (64.3%), $\chi^2 (4, N = 693) = 33.144, p = .000$.

Additional chi-square analyses showed that “Completing the doctoral degree in 3 years” was *extremely important* or *definitely important* for 64.5% of those affiliated with one of the universities, compared to 39.0% for those affiliated with the Church of the Nazarene or NTS, $\chi^2(4, N = 693) = 46.706, p = .000$. Those affiliated with one of the universities also reported that the “Availability of employer financial support” was *extremely important* or *definitely important* for 73.9% of them, compared to only 51.8% of those affiliated with the Church of the Nazarene or NTS, $\chi^2(4, N = 691) = 32.987, p = .000$. On the other hand, “Attending a religiously affiliated university” was *extremely important* or *definitely important* for 46.5% of those affiliated with the Church of the Nazarene or NTS, compared to 19.7% for those affiliated with one of the universities, $\chi^2(4, N = 692) = 74.052, p = .000$.

Several chi-square analyses were statistically significant when the researcher examined preferences by current field of the respondent. Those in the field of Healthcare were more likely to rate “The availability of weekend classes” as *extremely important* or *definitely important* (56.8%) compared to those in the fields of Business (52.0%), Education (45.6%), Other Fields (40.6%), and Religion/Theology (24.1%), $\chi^2(16, N = 696) = 46.625, p = .000$. Figure 21 illustrates this relationship.

Concerning “The availability of evening classes,” more than half of the respondents in every field except Religion/Theology rated this preference as *extremely important* or *definitely important*. Those in the field of Business were most likely to rate “The availability of evening classes” as *extremely important* or *definitely important* (78.0%), $\chi^2(16, N = 695) = 73.978, p = .000$. Figure 22 illustrates this relationship.

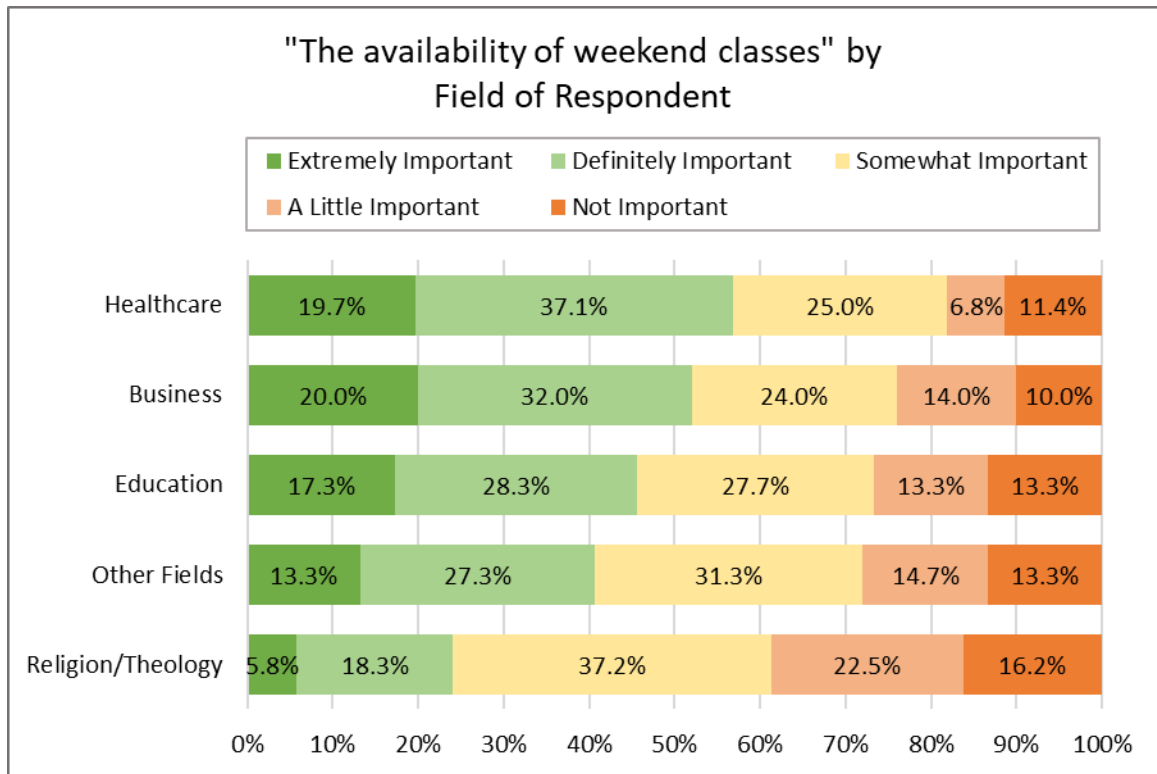


Figure 21. "The availability of weekend classes," by field of respondent.

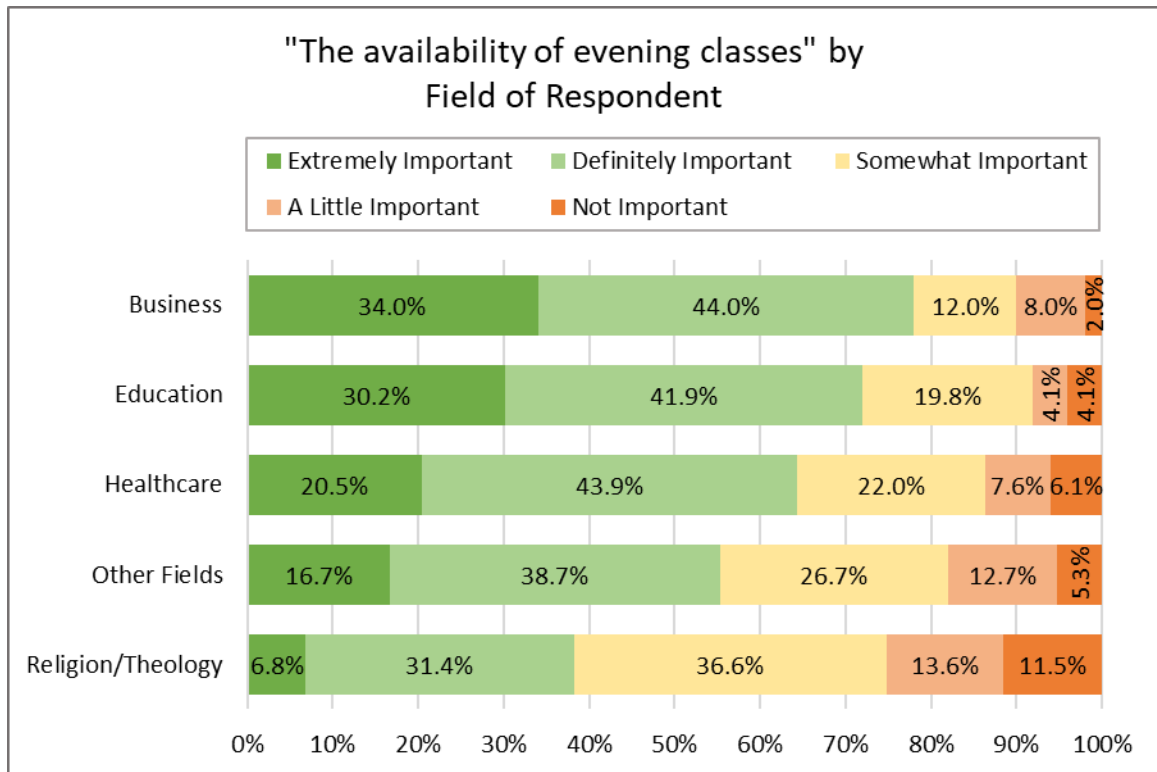


Figure 22. "The availability of evening classes," by field of respondent.

Regarding “The availability of online classes,” more than 60% of the respondents in every field rated this preference as *extremely important* or *definitely important*. Those in the field of Healthcare were most likely to rate “The availability of online classes” as *extremely important* or *definitely important* (90.8%), and those in the field of Religion/Theology were least likely to rate “The availability of online classes” as *extremely important* or *definitely important* (64.9%), $\chi^2 (16, N = 695) = 42.874, p = .000$. Figure 23 illustrates this relationship.

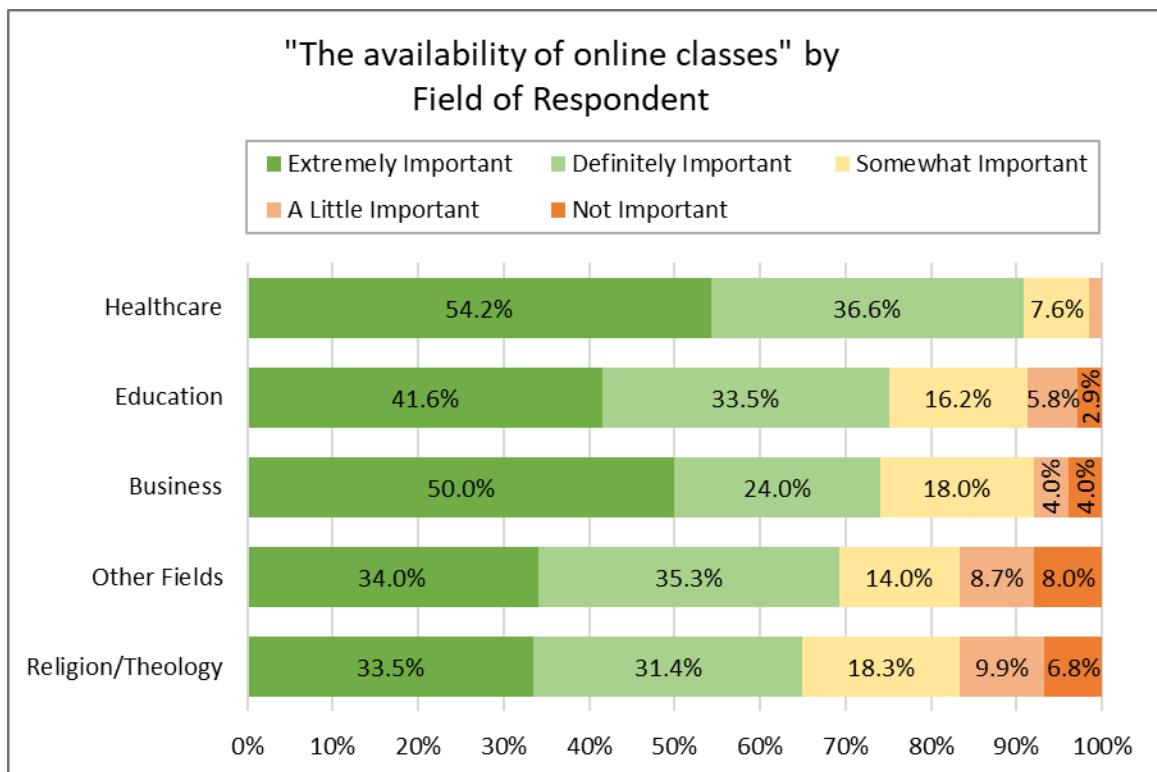


Figure 23. “The availability of online classes,” by field of respondent.

Only those in the field of education had more than half of their respondents’ (57.2%) rate having “A cohort model” as either *extremely important* or *definitely important*. Conversely, only 33.0% of those in the field of Religion/Theology rated

having “A cohort model” as either *extremely important* or *definitely important*, $\chi^2(16, N = 694) = 43.688, p = .000$. Figure 24 illustrates this relationship.

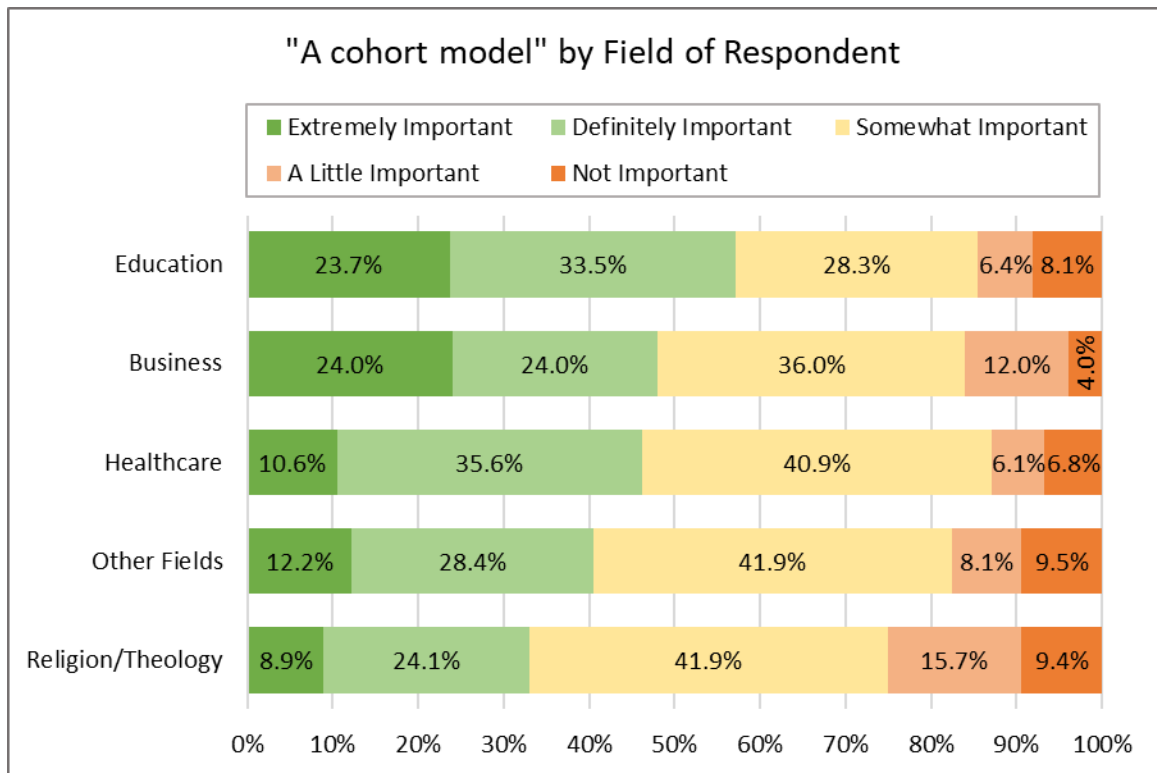


Figure 24. “A cohort model,” by field of respondent.

More than half of the respondents in every field except Religion/Theology rated “Completing the doctoral degree in 3 years” as *extremely important* or *definitely important*. Those in the field of Healthcare were most likely to rate “Completing the doctoral degree in 3 years” as *extremely important* or *definitely important* (73.5%), while those in the field of Religion/Theology were least likely to rate “Completing the doctoral degree in 3 years” as *extremely important* or *definitely important* (44.5%), $\chi^2(16, N = 695) = 43.689, p = .000$. Figure 25 illustrates this relationship.

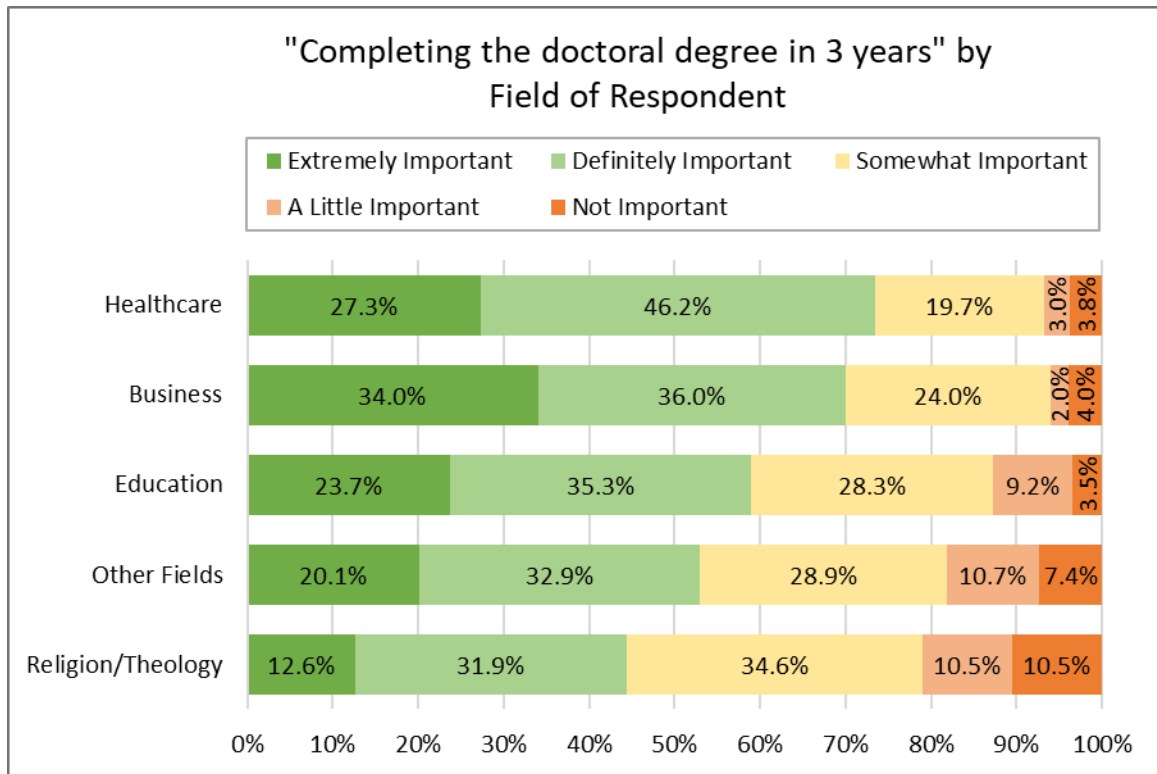


Figure 25. "Completing the doctoral degree in 3 years," by field of respondent.

Fifty-six percent of those in the field of Religion/Theology rated "Attending a religiously affiliated university" as either *extremely important* or *definitely important*. No other field had more than 25% of respondents' rate this preference as either *extremely important* or *definitely important*, $\chi^2(16, N = 694) = 156.272, p = .000$.

Another difference between the field of Religion/Theology when compared to the other fields in the study concerned the "Availability of employer financial support." Fewer than half of the respondents in the field of Religion/Theology rated the "Availability of employer financial support" as either *extremely important* or *definitely important* (48.2%). More than half of all the respondents in every other field rated the "Availability of employer financial support" as either *extremely important* or *definitely important*, with those in the field of Business most likely to rate this item as either

extremely important or definitely important (83.7%), $\chi^2 (16, N = 693) = 71.396, p = .000$.

Figure 26 illustrates this relationship.

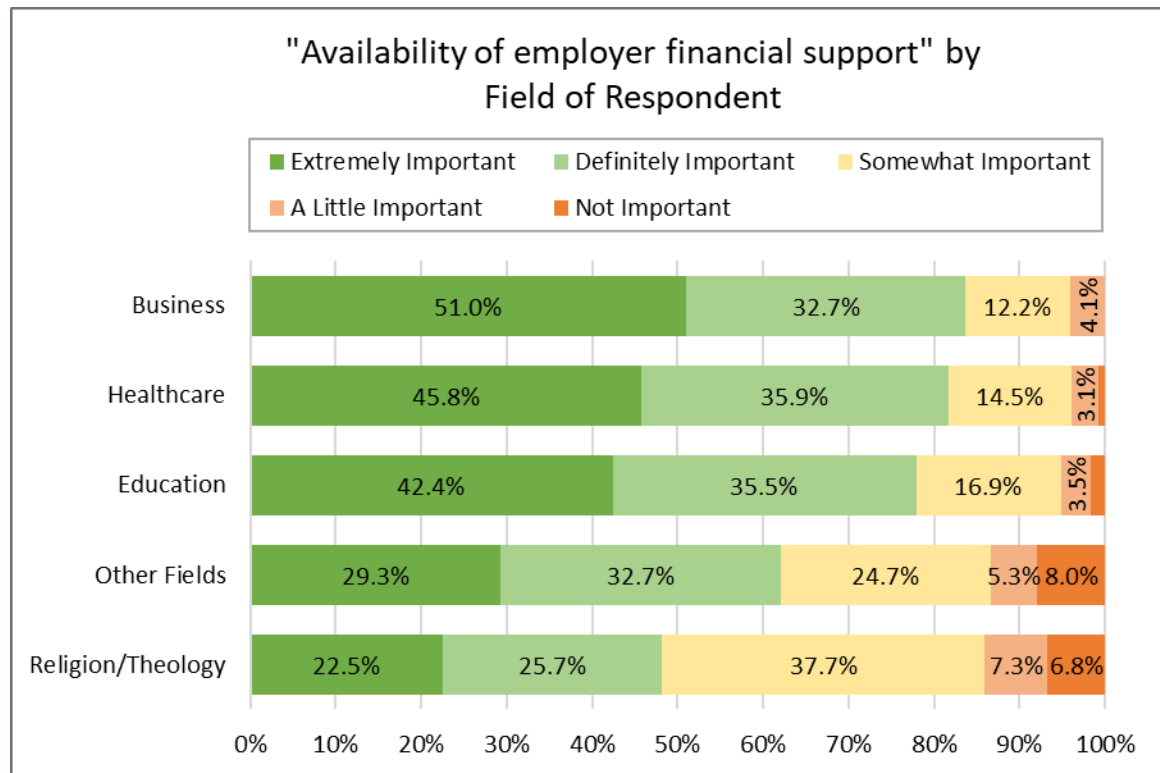


Figure 26. “Availability of employer financial support,” by field of respondent.

Motivations.

Figure 27 shows the level of applicability for a list of motivations related to doctoral education. Respondents rated these items on the following 5-point scale: (1) *Not at all true for me*, (2), (3), (4), and (5) *Very true for me*. The motivation that received the highest percentage of respondents who rated it as either (5) *very true for me* or (4) was that a doctoral degree would “Give me a sense of personal satisfaction and achievement” (81.3%). Conversely, the only motivational items for which fewer than one-in-three respondents rated the item as either (5) *very true for me* or (4) were “Allow me to change my occupational area” (27.2%) and “Help me get the respect I deserve at work” (25.2%).

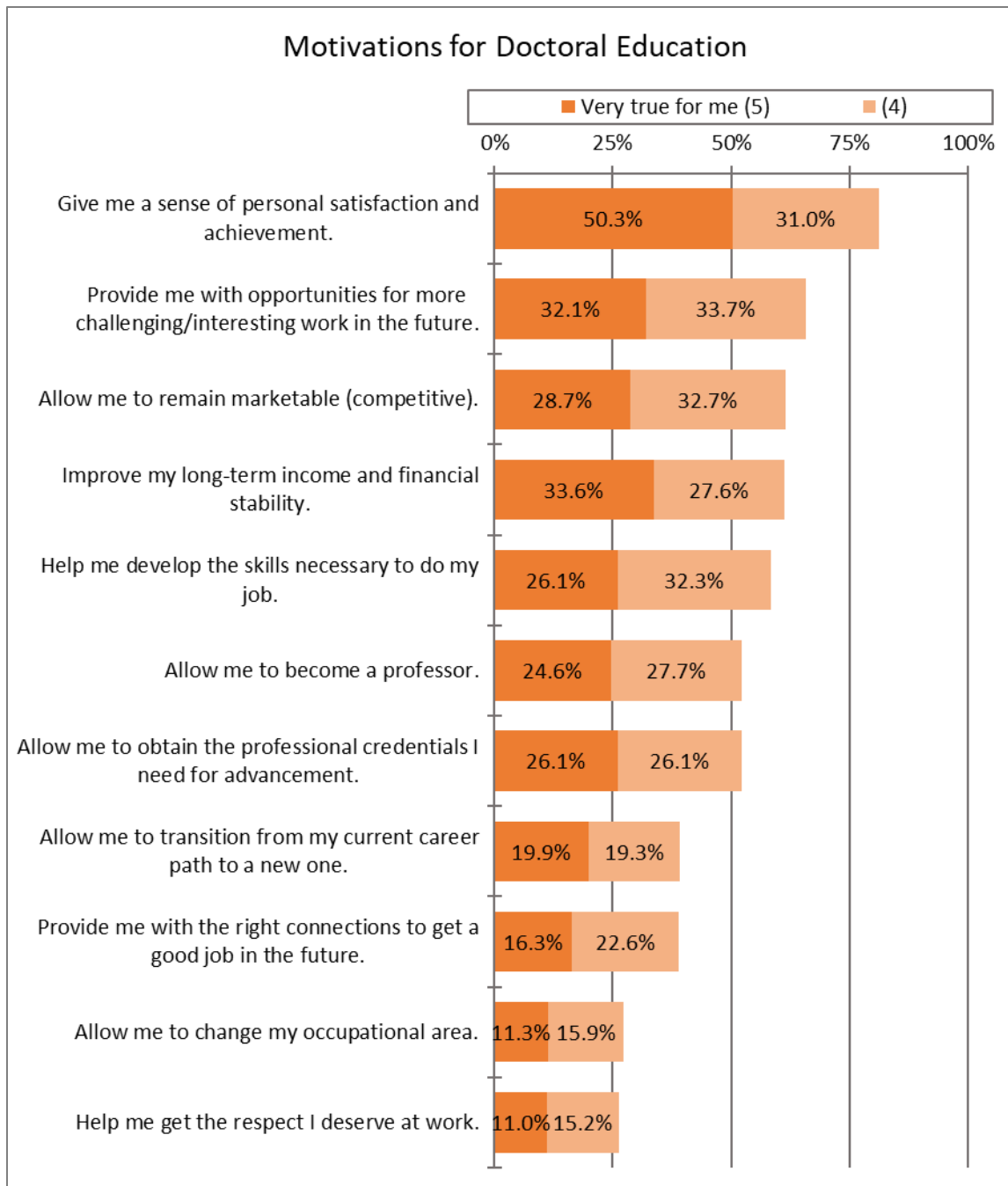


Figure 27. Motivations for doctoral education.

A series of chi-square analyses revealed statistically significance differences in motivations related to age, current work situation, current class-load, organization type, and current field. When responding to the statement that a doctoral degree will “Provide me with the right connections to get a good job,” no age group rated this motivation as

either (5) *very true for me* or (4) at more than 50%; however, younger respondents were more likely to rate this motivation higher than older respondents, $\chi^2(16, N = 695) = 112.202, p = .000$. Figure 28 illustrates this relationship.

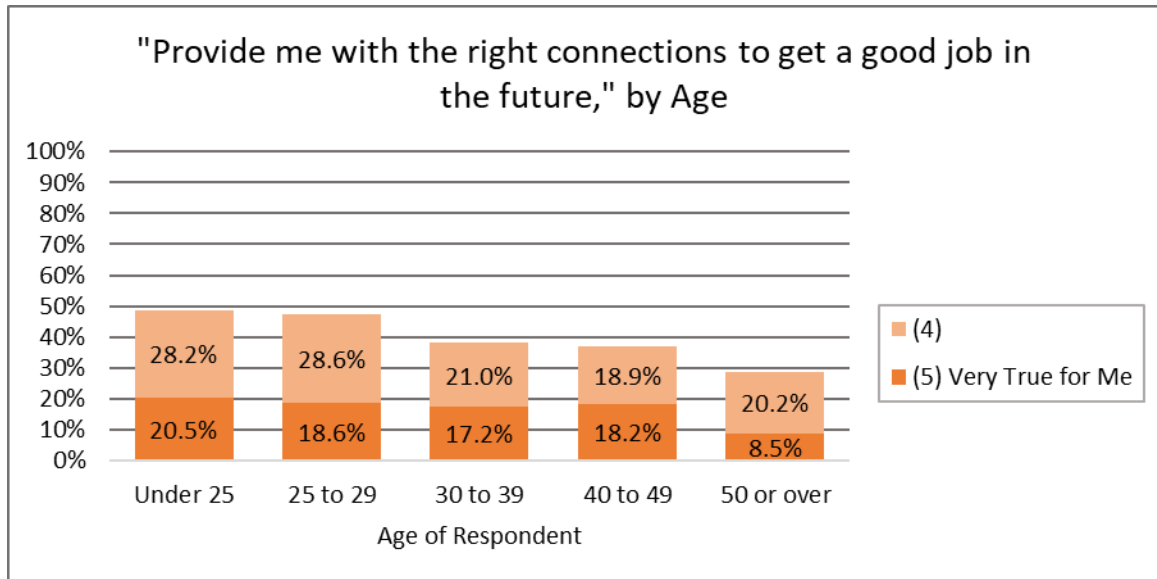


Figure 28. “Provide me with the right connections to get a good job in the future,” by age.

Age also affected the percentage of respondents who thought a doctoral degree would “Improve my long-term income and financial stability.” Seventy-seven percent of those *under 25* years of age rated this motivation as either (5) *very true for me* or (4), compared to 50.1% for those age *50 or over*, $\chi^2(16, N = 694) = 39.938, p = .001$. Figure 29 illustrates this relationship.

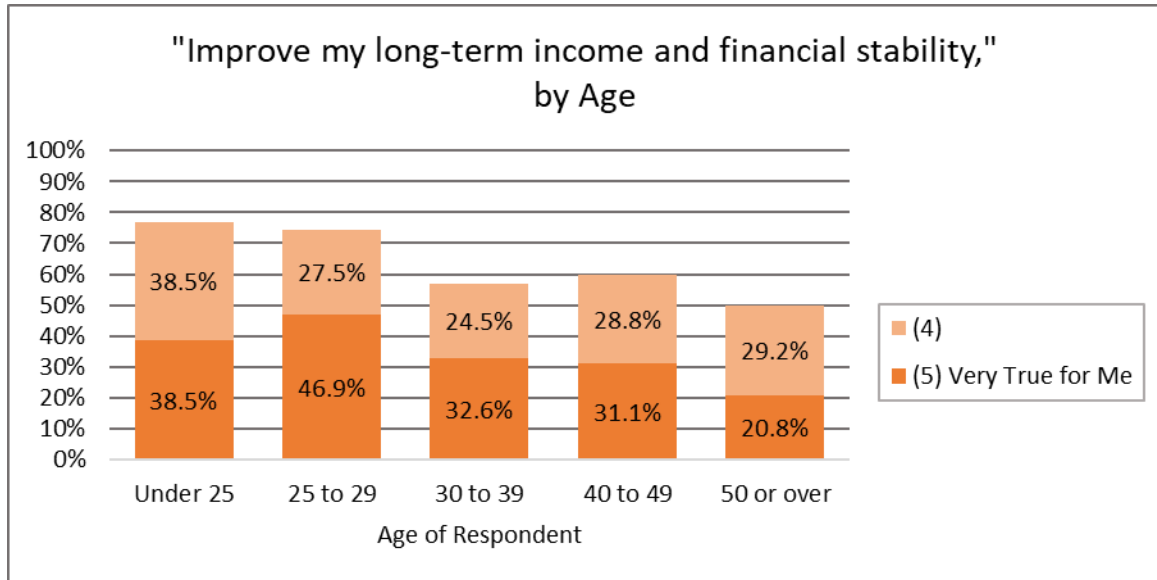


Figure 29. “Improve my long-term income and financial stability,” by age.

In addition to age, the current work situation of respondents affected the percentage who thought a doctoral degree would “Provide me with opportunities for more challenging/interesting work in the future.” Eighty-three percent of those *not currently working* rated this motivation as either (5) *very true for me* or (4), compared to 71% of those *working part-time*, and 64.1% of those *working full-time*, $\chi^2(8, N = 693) = 21.960, p = .005$. Figure 30 illustrates this relationship.

The current work situation of respondents also affected the percentage who thought a doctoral degree would “Help me develop the skills necessary to do my job.” Those *working part-time* were most likely to report this motivation as either (5) *very true for me* or (4) (73.3%), followed by those *not currently working* (66.7%), and those *working full-time* (55.9%), $\chi^2(8, N = 693) = 25.558, p = .001$. Figure 31 illustrates this relationship.

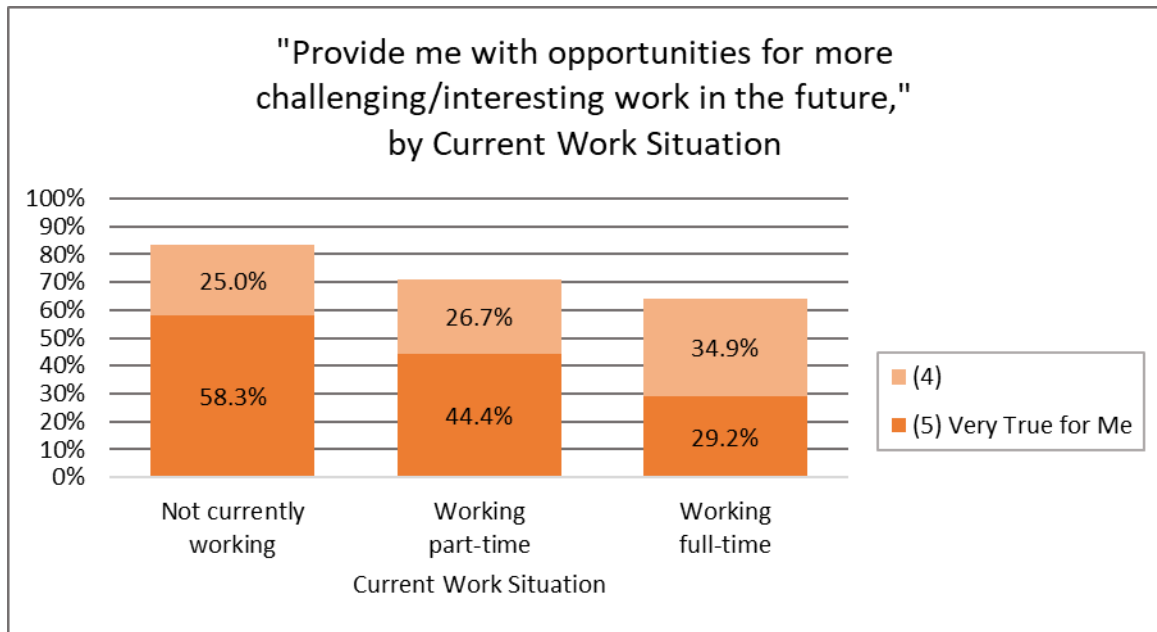


Figure 30. “Provide me with opportunities for more challenging/interesting work in the future,” by current work situation.

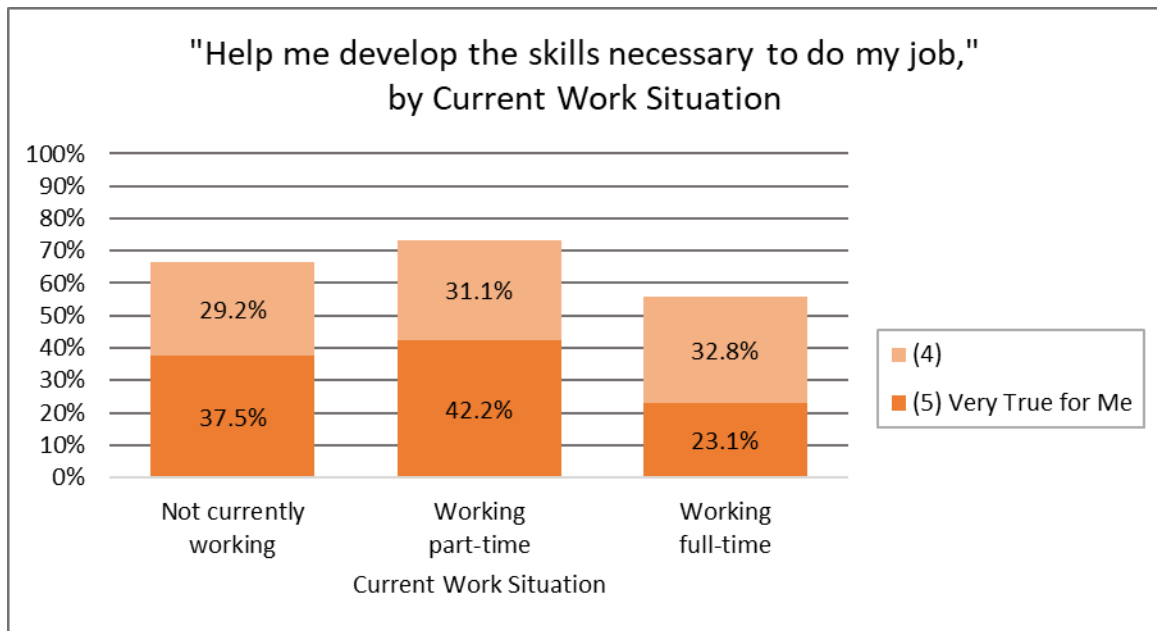


Figure 31. “Help me develop the skills necessary to do my job,” by current work situation.

The current class-load of respondents affected the percentage who thought a doctoral degree would “Allow me to obtain the professional credentials I need for

advancement.” Seventy percent of those *taking classes full-time* rated this motivation as either (5) *very true for me* or (4), compared to 57.1% of those *taking classes part-time*, and 40.6% of those *not currently taking classes*, $\chi^2(8, N = 696) = 65.900, p = .000$.

Figure 32 illustrates this relationship.

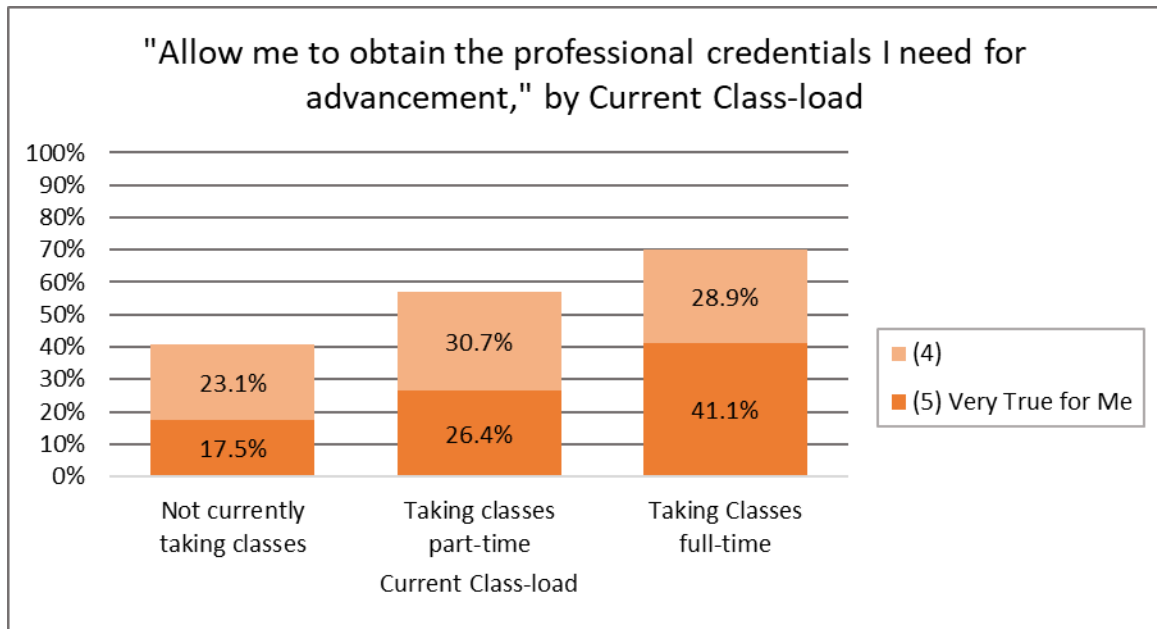


Figure 32. “Allow me to obtain the professional credentials I need for advancement,” by current class-load.

The current class-load of respondents also influenced the percentage who thought a doctoral degree would “Allow me to remain marketable (competitive).” Those *taking classes full-time* were most likely to report this motivation as either (5) *very true for me* or (4) (76.6%), followed by those *taking classes part-time* (67.1%), and those *not currently taking classes* (50.7%), $\chi^2(8, N = 696) = 59.170, p = .000$. Figure 33 illustrates this relationship.

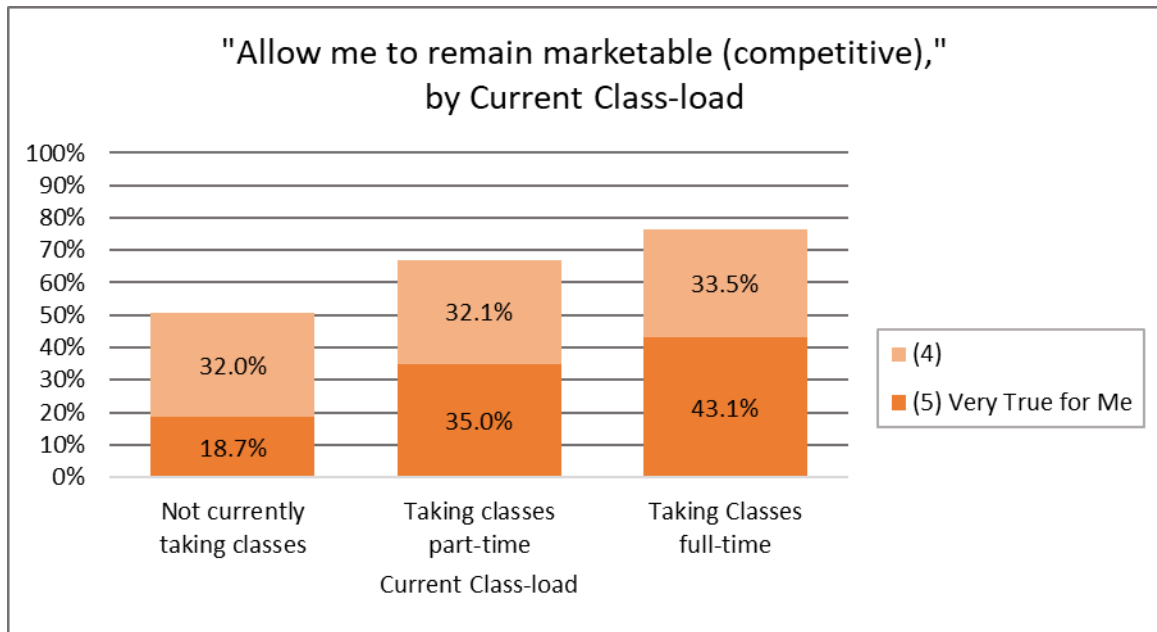


Figure 33. “Allow me to remain marketable (competitive),” by current class-load.

Additionally, the current class-load of respondents affected the percentage who thought a doctoral degree would “Improve my long-term income and financial stability.” Only 47.2% of those *not currently taking classes* rated this motivation as either (5) *very true for me* or (4); however, 75.0% of those *taking classes part-time*, and 77.2% of those *taking classes full-time* rated this motivation as either (5) *very true for me* or (4), $\chi^2(8, N = 695) = 88.300, p = .000$. Figure 34 illustrates this relationship.

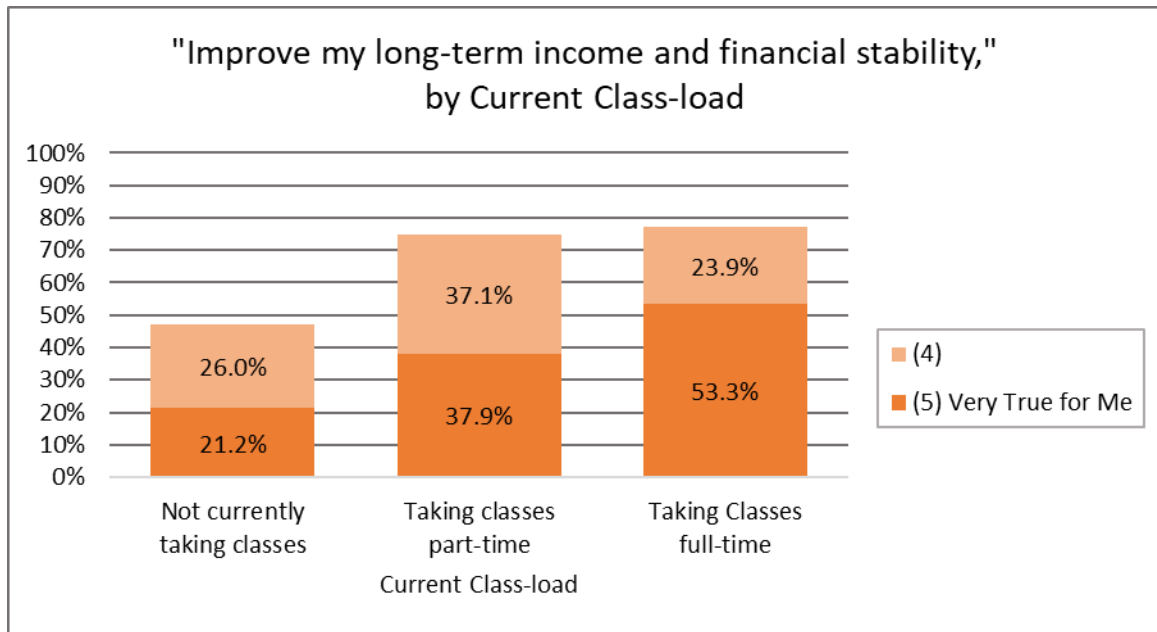


Figure 34. "Improve my long-term income and financial stability," by current class-load.

Regarding organization type, chi-square analyses revealed many statistically significant differences between those associated with the Church of the Nazarene or NTS versus those associated with universities. In every case, those associated with universities were more likely to rate each motivational statement as either (5) *very true for me* or (4) compared to those associated with the Church of the Nazarene or NTS. Table 10 shows this comparison.

Table 10

Motivations by Organizational Type

Statement	(5) Very True for Me or (4)		<i>n</i>	<i>df</i>	χ^2	<i>p</i>
	Naz/NTS	Univ.				
Improve my long-term income and financial stability	38.8%	70.6%	693	4	70.383	.000
Provide me with opportunities for more challenging/interesting work in the future	59.7%	68.4%	694	4	11.979	.018
Allow me to remain marketable (competitive)	46.2%	67.4%	694	4	38.401	.000
Allow me to obtain the professional credentials I need for advancement	42.8%	56.2%	694	4	23.697	.000
Allow me to transition from my current career path to a new one	23.9%	45.4%	694	4	33.250	.000
Provide me with the right connections to get a good job in the future	28.5%	43.2%	693	4	21.062	.000
Allow me to change my occupational area	17.9%	31.1%	693	4	14.928	.005
Help me get the respect I deserve at work	21.4%	28.3%	692	4	17.056	.002

Several chi-square analyses were statistically significant when the researcher examined motivations by the current field of the respondent. The current field of the respondents affected the percentage who thought a doctoral degree would “Provide me with opportunities for more challenging/interesting work in the future.” Eighty-four percent of those in the field of *Business* rated this motivation as either (5) *very true for me* or (4), compared to 56.5% of those in the field of *Religion/Theology*. It should be noted that more than half of the respondents in all fields rated this motivation as either (5) *very true for me* or (4), $\chi^2(16, N = 696) = 33.915, p = .006$. Figure 35 illustrates this relationship.

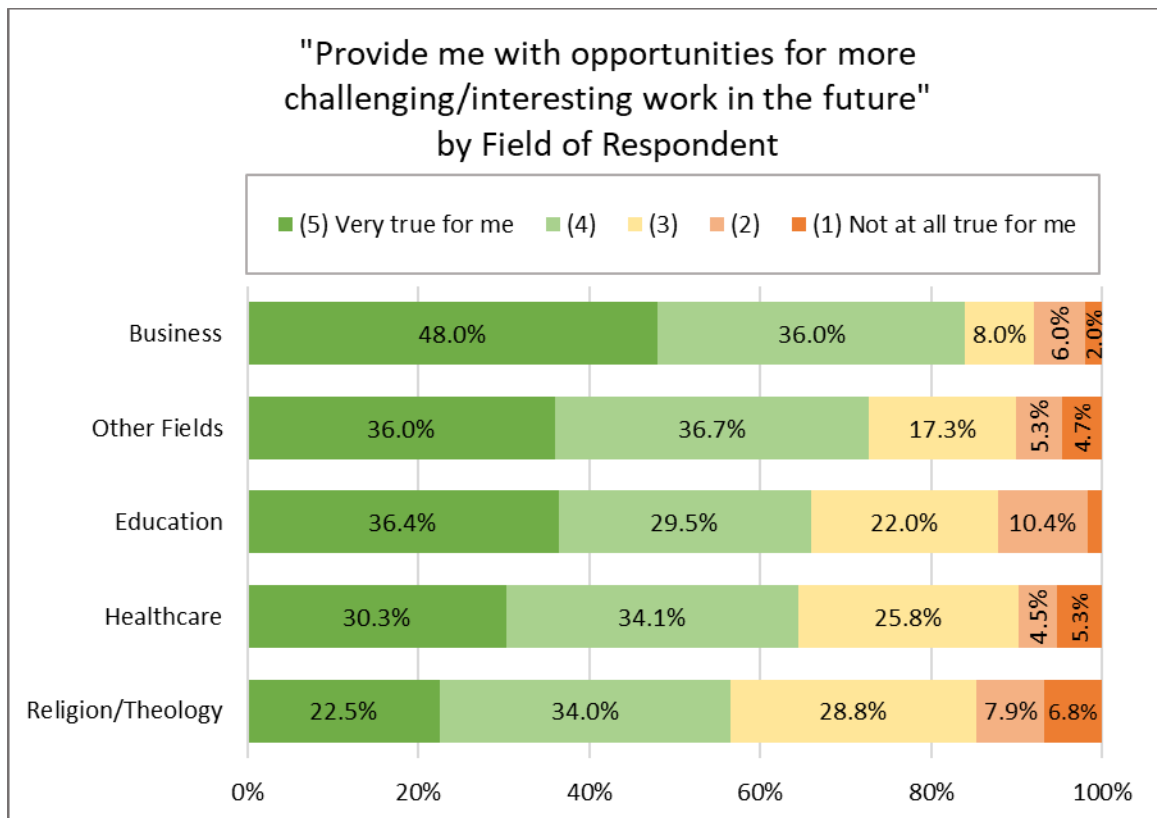


Figure 35. “Provide me with opportunities for more challenging/interesting work in the future,” by field of respondent.

Concerning the motivation that a doctoral degree would “Allow me to obtain the professional credentials I need for advancement,” more than half of the respondents in every field except *Religion/Theology* rated this motivation as either (5) *very true for me* or (4). Those in the field of *Healthcare* were most likely to rate this item as either (5) *very true for me* or (4) (61.3%), although the fields of *Business*, *Education*, and *Other Fields* were close behind. In comparison, only 33.0% of those in the field of *Religion/Theology* rated this item as either (5) *very true for me* or (4), $\chi^2(16, N = 696) = 70.874, p = .000$. Figure 36 illustrates this relationship.

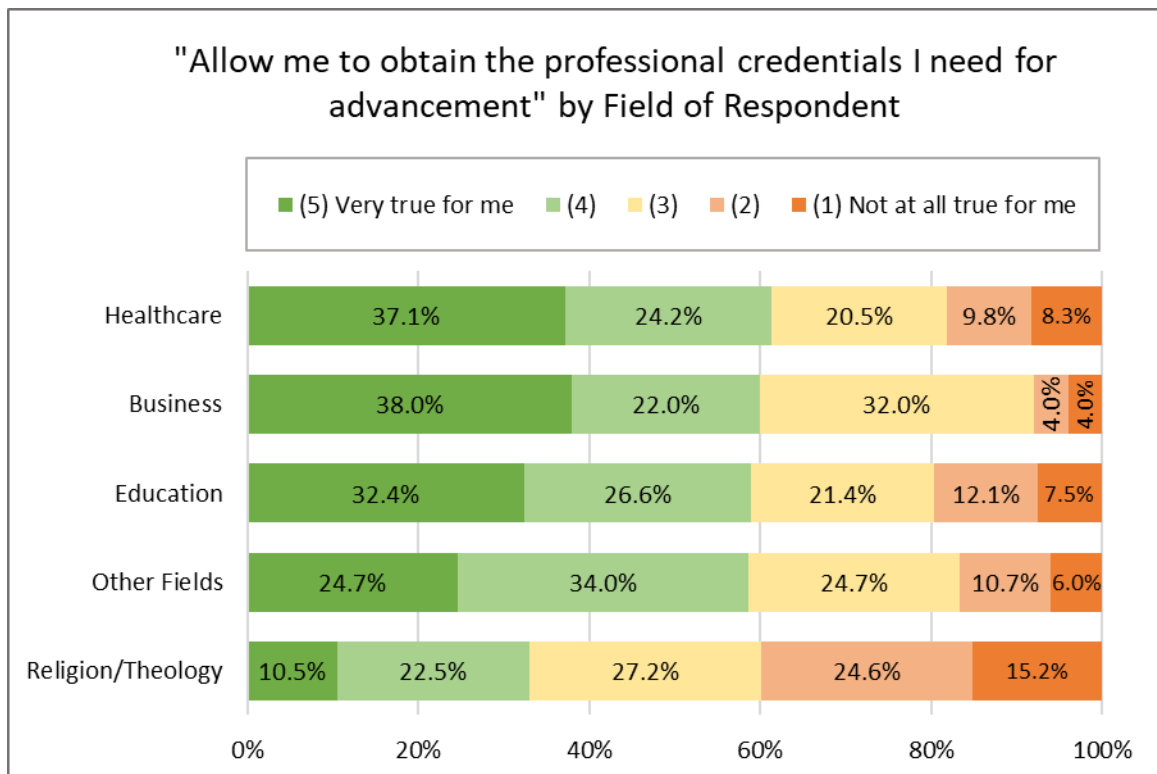


Figure 36. “Allow me to obtain the professional credentials I need for advancement,” by field of respondent.

More than half of those in the fields of *Business* (56.0%) and *Healthcare* (50.7%) rated as either (5) *very true for me* or (4) that a doctoral degree would “Allow me to transition from my current career path to a new one.” On the other hand, only 17.8% of

respondents in the field of *Religion/Theology* indicated that a doctoral degree would “Allow me to transition from my current career path to a new one” with a rating of either (5) *very true for me* or (4), $\chi^2 (16, N = 696) = 70.552, p = .000$. Figure 37 illustrates this relationship.

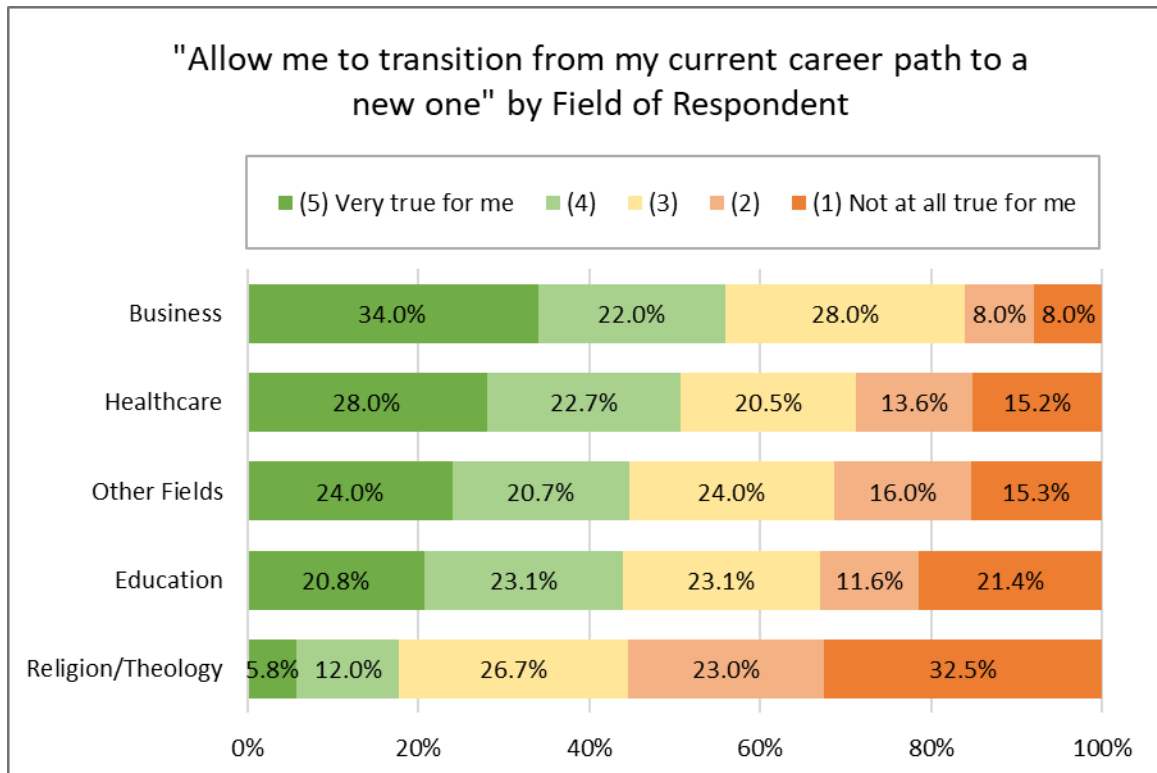


Figure 37. “Allow me to transition from my current career path to a new one,” by field of respondent.

Those in the field of *Business* were the only group where more than half of the respondents (55.1%) rated the motivation that a doctoral degree would “Provide me with the right connections to get a good job in the future” with either (5) *very true for me* or (4). Conversely, those in the field of *Religion/Theology* were least likely to report that a doctoral degree would “Provide me with the right connections to get a good job in the future” with either (5) *very true for me* or (4) (22.0%), $\chi^2 (16, N = 695) = 54.163, p = .000$. Figure 38 illustrates this relationship.

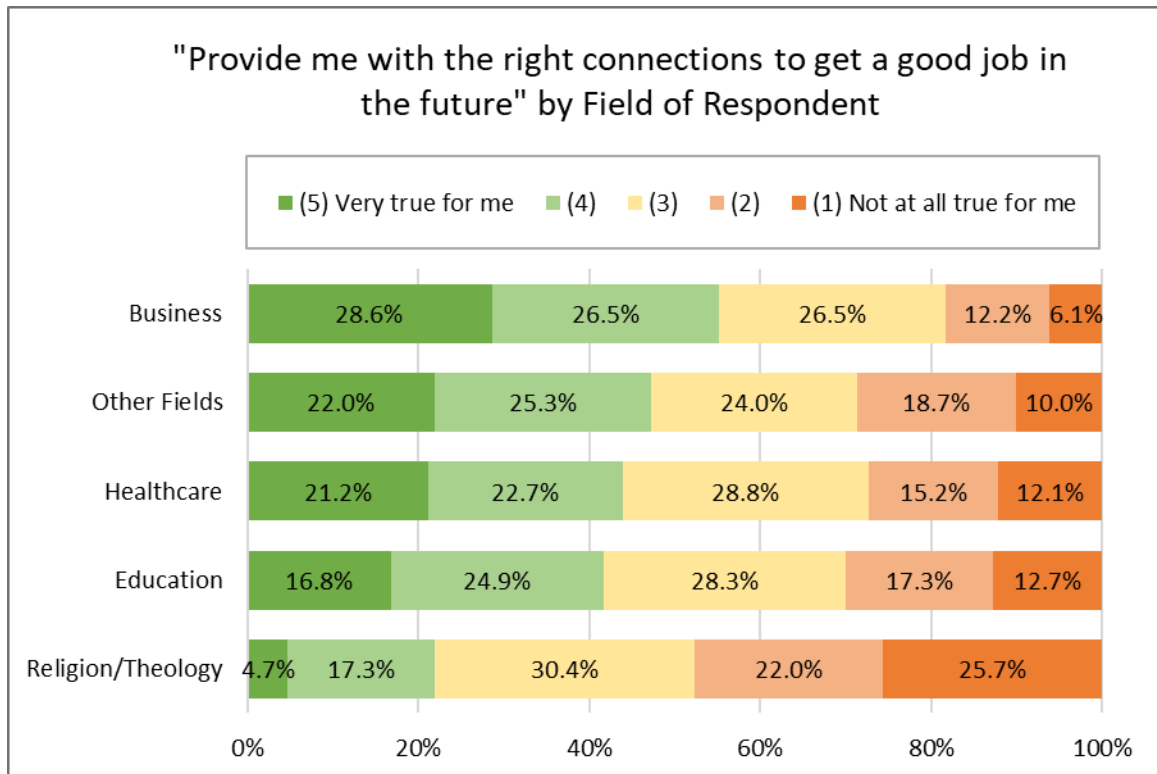


Figure 38. "Provide me with the right connections to get a good job in the future," by field of respondent.

A chi-square analysis also revealed a statistically significant difference by the field of the respondent to the statement that a doctoral degree would "Help me develop the skills necessary to do my job". Those in the field of *Business* were most likely to have rated this statement as either (5) *very true for me* or (4) (72.0%), whereas those in the field of *Education* were least likely to have rated this statement as either (5) *very true for me* or (4) (49.2%), $\chi^2(16, N = 696) = 43.080, p = .000$. Figure 39 illustrates this relationship.

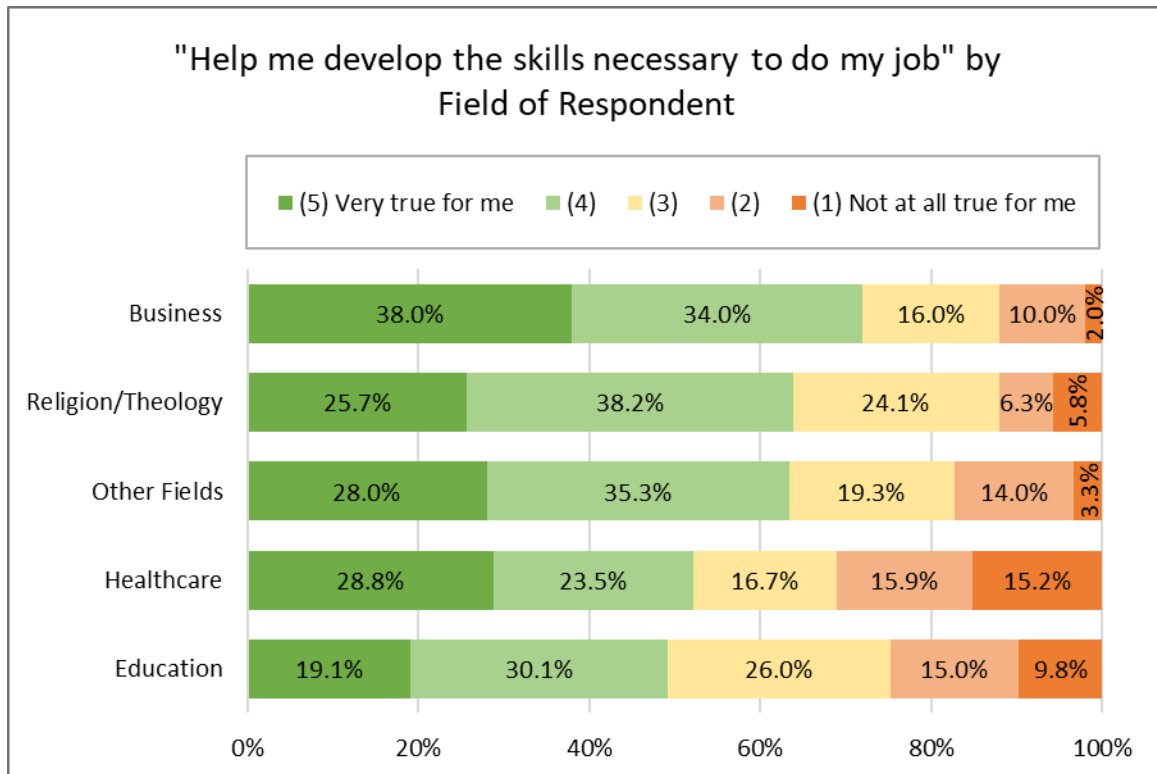


Figure 39. "Help me develop the skills necessary to do my job," by field of respondent.

Those in the field of *Business* were also more likely than those in other fields to have rated the statement that a doctoral degree would "Allow me to remain marketable (competitive)" as either (5) *very true for me* or (4) (86.0%). The next closest field was *Healthcare*, where 70.5% rated the statement as either (5) *very true for me* or (4). Those in the field of *Religion/Theology* were least likely to have rated this statement as either (5) *very true for me* or (4) (42.9%), $\chi^2(16, N = 696) = 71.624, p = .000$. Figure 40 illustrates this relationship.

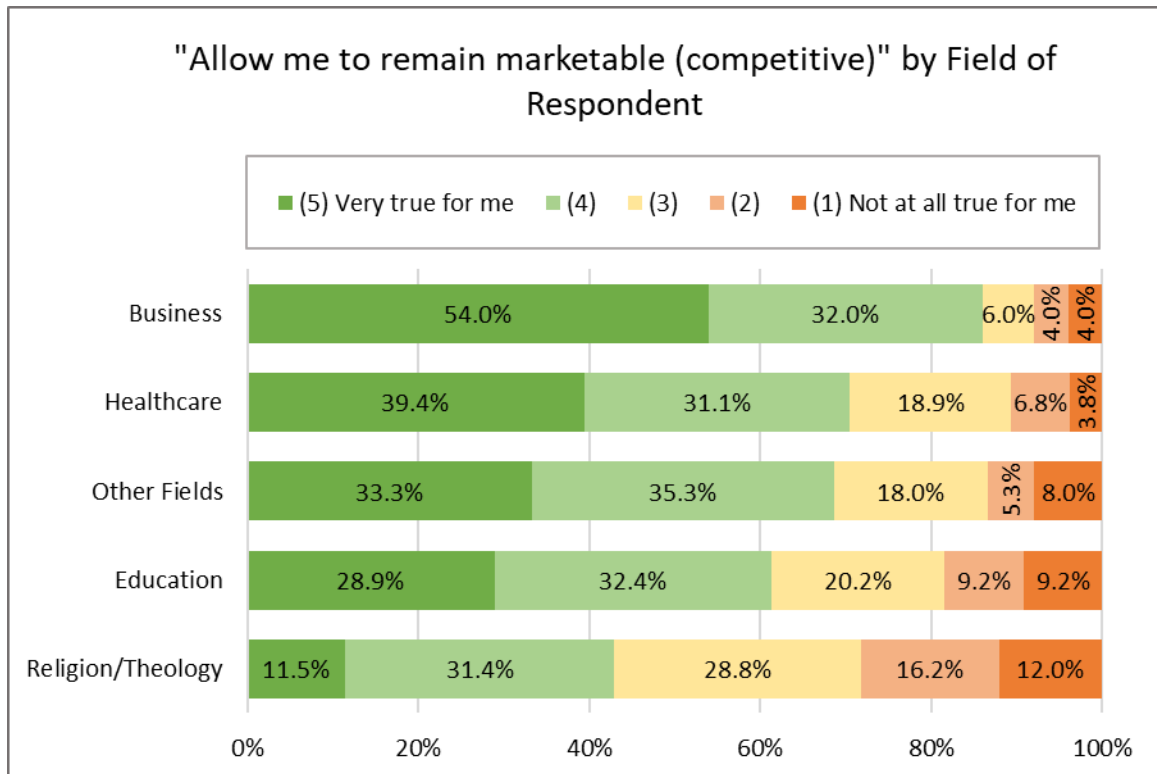


Figure 40. "Allow me to remain marketable (competitive)," by field of respondent.

A final chi-square analysis concerning motivations for pursuing a doctoral degree revealed that those in the field of *Business* were more likely than other fields to have rated the statement that a doctoral degree would "Improve my long-term income and financial stability" as either (5) *very true for me* or (4) (86.0%). This compares to only 34.1% of those in the field of *Religion/Theology* who rated this statement as either (5) *very true for me* or (4), $\chi^2(16, N = 695) = 112.202, p = .000$. Figure 41 illustrates this relationship.

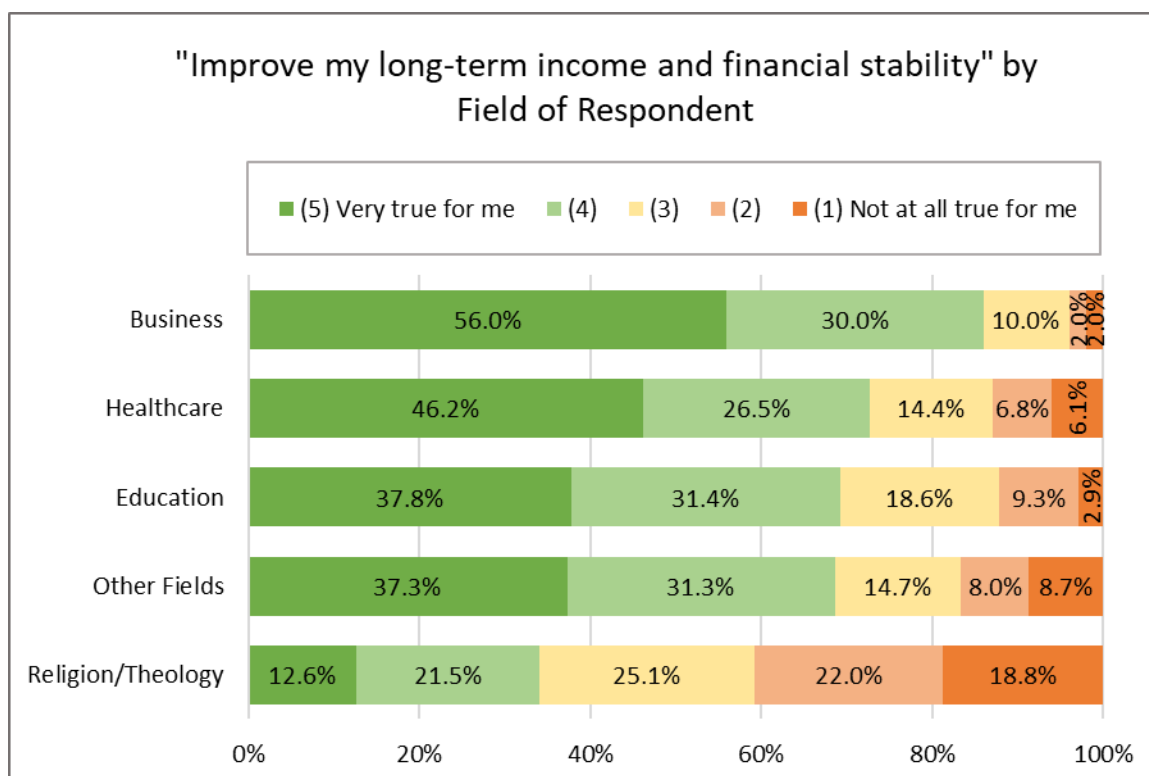


Figure 41. "Improve my long-term income and financial stability," by field of respondent.

Obstacles in Pursuing a Doctoral Degree

The third research question asked, "What are the obstacles for master's degree students/graduates in pursuing a doctoral degree?" To answer this research question the researcher analyzed six statements from the survey instrument. Respondents rated the statements using the following scale: (1) *Not at all true for me*, (2), (3), (4), and (5) *Very true for me*. The obstacle most frequently rated as either (5) *Very true for me* or (4) was that pursuing a doctoral degree would "Require more money than I have available" (78.5%). The obstacle least frequently rated as either (5) *Very true for me* or (4) was that pursuing a doctoral degree would "Require me to delay accepting attractive job opportunities" (15.8%). Figure 42 shows the percentages for those indicating either (5) *Very true for me* or (4) for the six survey statements concerning obstacles.

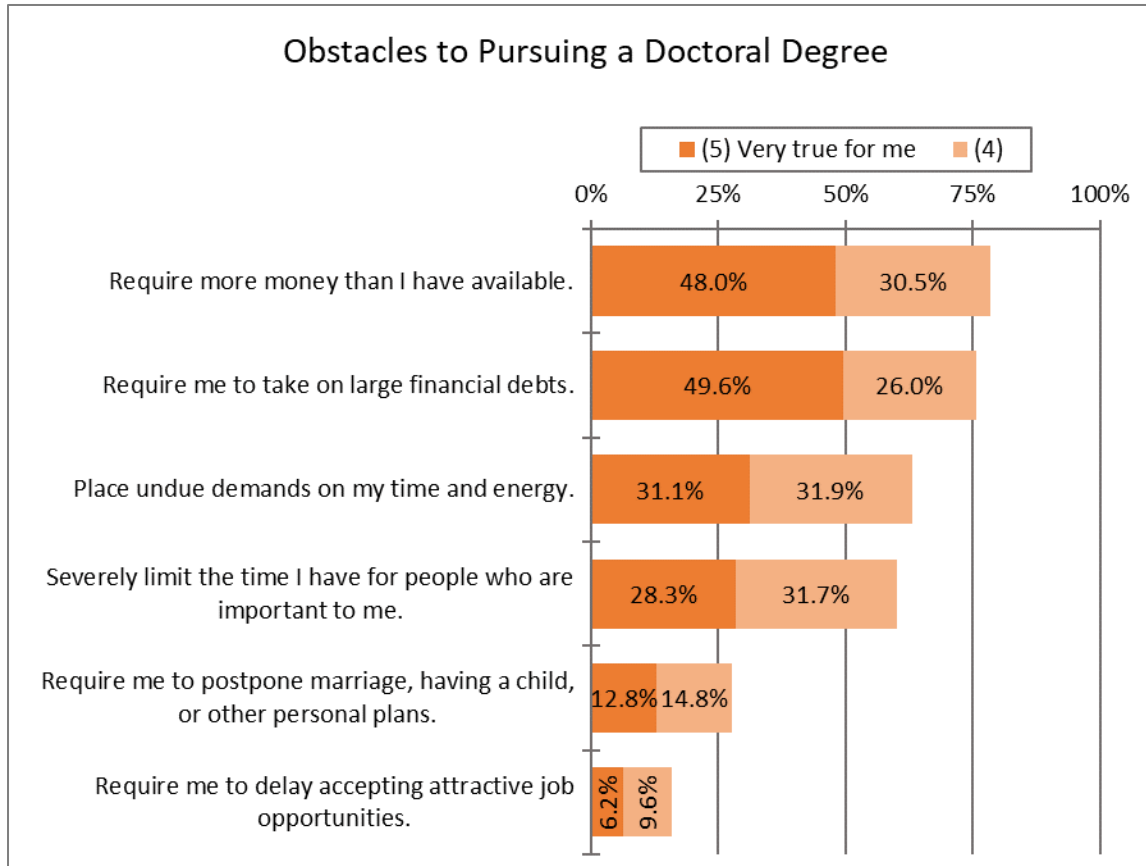


Figure 42. Obstacles to pursuing a doctoral degree.

A series of chi-square analyses revealed statistically significance differences in the obstacles to pursuing a doctoral degree related to age, current class-load, organization type, and current field. Regarding the statement that pursuing a doctoral degree would “Require me to postpone marriage, having a child, or other personal plans,” younger respondents were more likely to rate this statement as either (5) *Very true for me* or (4). In fact, more than half (52.2%) of those between the ages of 25 to 29 rated this statement as either (5) *Very true for me* or (4), $\chi^2(16, N = 695) = 129.769, p = .000$. Figure 43 illustrates this relationship.

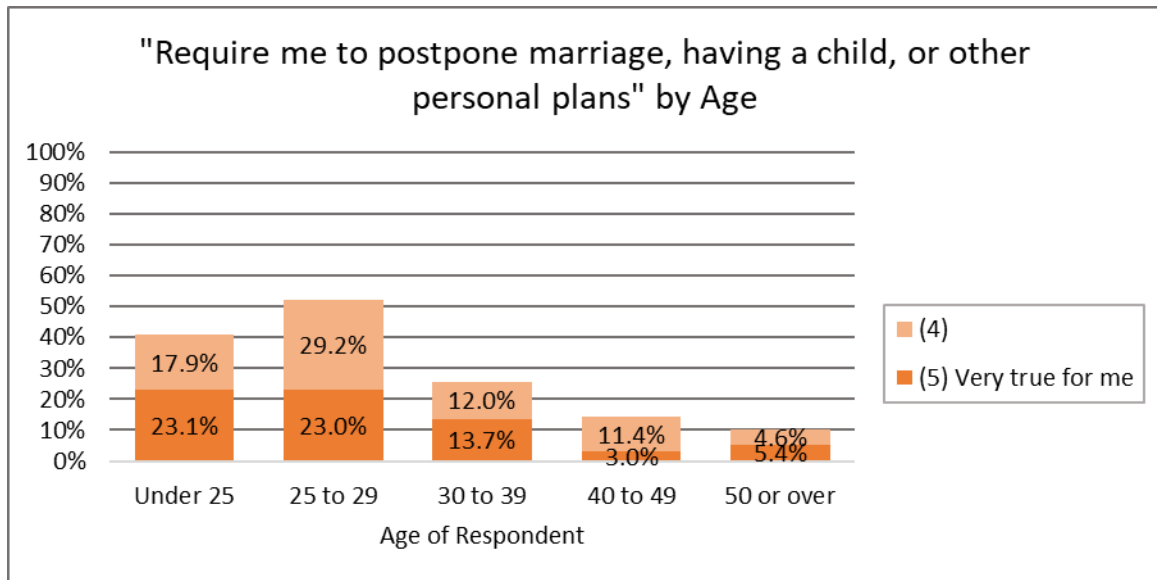


Figure 43. “Require me to postpone marriage, having a child, or other personal plans,” by age.

Younger respondents were also more likely to rate the statement that pursuing a doctoral degree would “Require me to delay accepting attractive job opportunities” as either (5) *Very true for me* or (4). Overall, only 15.8% rated this item as either (5) *Very true for me* or (4); however, 35.9% of those *under 25* did so, as did 26% of those between the ages of 25 to 29, $\chi^2 (16, N = 694) = 45.672, p = .000$. Figure 44 illustrates this relationship.

Another chi-square analysis revealed that respondents who were *taking classes full-time* were more likely to rate the statement that pursuing a doctoral degree would “Require me to postpone marriage, having a child, or other personal plans” as either (5) *Very true for me* or (4). Overall, only 27.6% rated this item as either (5) *Very true for me* or (4); however, 39.6% of those *taking classes full-time* did so, compared to 31.5% of those *taking classes part-time*, and 19.5% of those *not currently taking classes*, $\chi^2 (8, N = 696) = 33.872, p = .000$. Figure 45 illustrates this relationship.

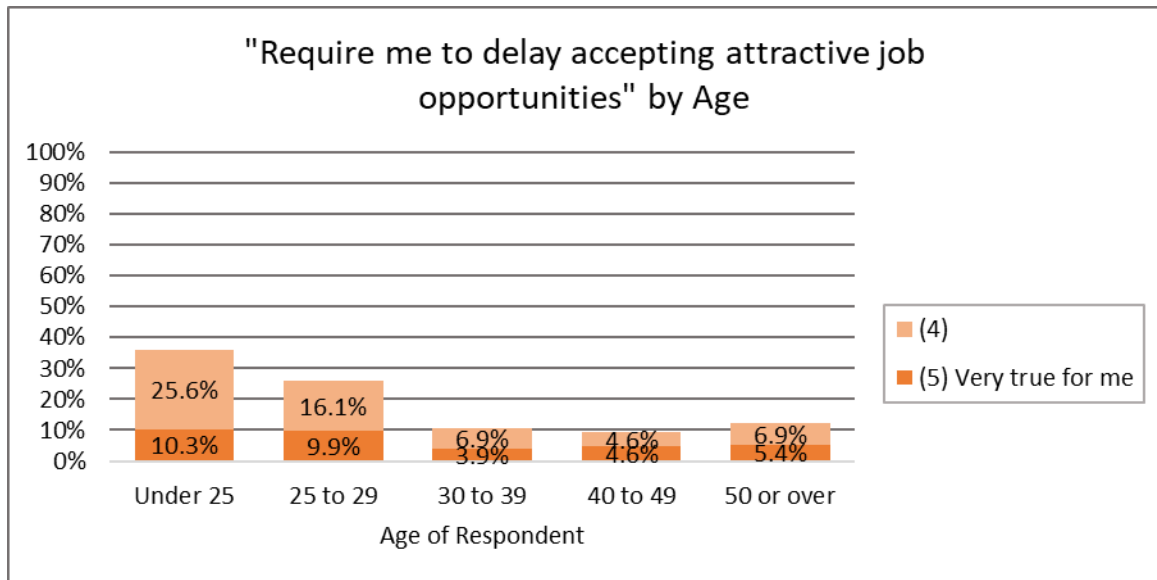


Figure 44. "Require me to delay accepting attractive job opportunities," by age.

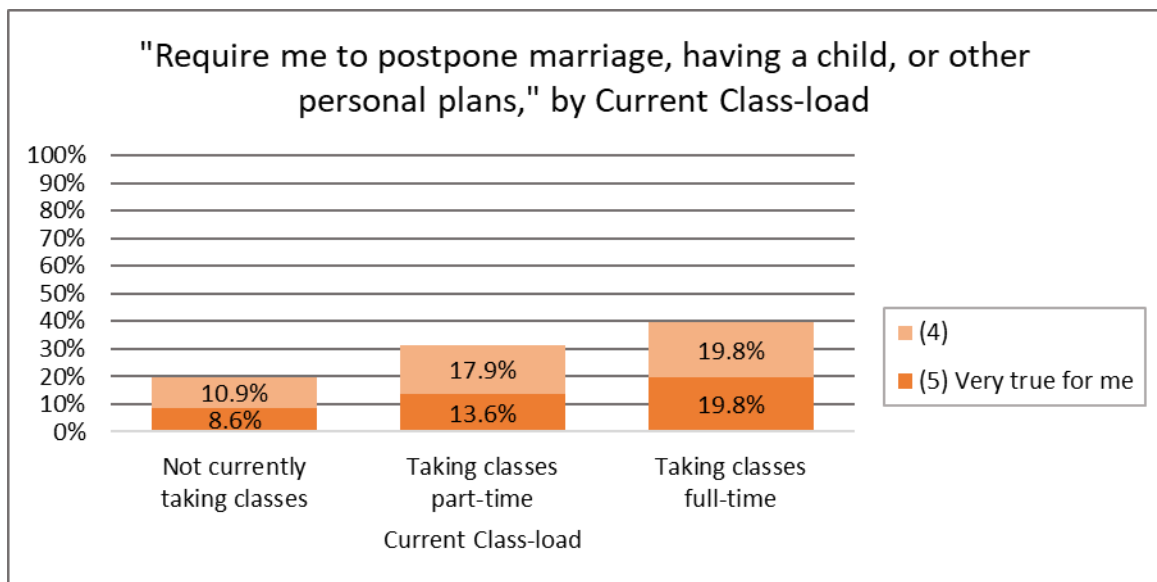


Figure 45. "Require me to postpone marriage, having a child, or other personal plans," by current class-load.

In addition to the differences by current class-load to the statement that pursuing a doctoral degree would "Require me to postpone marriage, having a child, or other personal plans," there was also a difference to this statement by organization type. Respondents associated with one of the *universities* in the study were more likely to have

rated this statement as either (5) *Very true for me* or (4) (32.6%), compared to those associated with the *Church of the Nazarene* or *NTS* (15.5%), $\chi^2(4, N = 694) = 32.610, p = .000$.

Organization type also affected the percentage of respondents who rated the statement that pursuing a doctoral degree would “Require me to delay accepting attractive job opportunities” as either (5) *Very true for me* or (4). As noted earlier, only 15.8% of all respondents rated this statement as either (5) *Very true for me* or (4); however, this figure rose to 18.7% for the respondents associated with one of the *universities*, and fell to 8.5% of the respondents associated with the *Church of the Nazarene* or *NTS*, $\chi^2(4, N = 693) = 20.391, p = .000$.

Additionally, chi-square analyses revealed statistically significant differences in the fields of respondents to the statements that pursuing a doctoral degree would “Require me to postpone marriage, having a child, or other personal plan,” and “Require me to delay accepting attractive job opportunities.” For those in the field of *Healthcare*, 38.6% rated the statement that pursuing a doctoral degree would “Require me to postpone marriage, having a child, or other personal plan” as either (5) *Very true for me* or (4); compared to just 11.6% for those in the field of *Religion/Theology*, $\chi^2(16, N = 696) = 50.545, p = .000$. Figure 46 illustrates this relationship.

Similarly, those in the field of *Healthcare* were more likely to rate the statement that pursuing a doctoral degree would “Require me to delay accepting attractive job opportunities” as either (5) *Very true for me* or (4) (24.2%). This compared to just 6.3% for those in the field of *Religion/Theology*, $\chi^2(16, N = 695) = 65.690, p = .000$. Figure 47 illustrates this relationship.

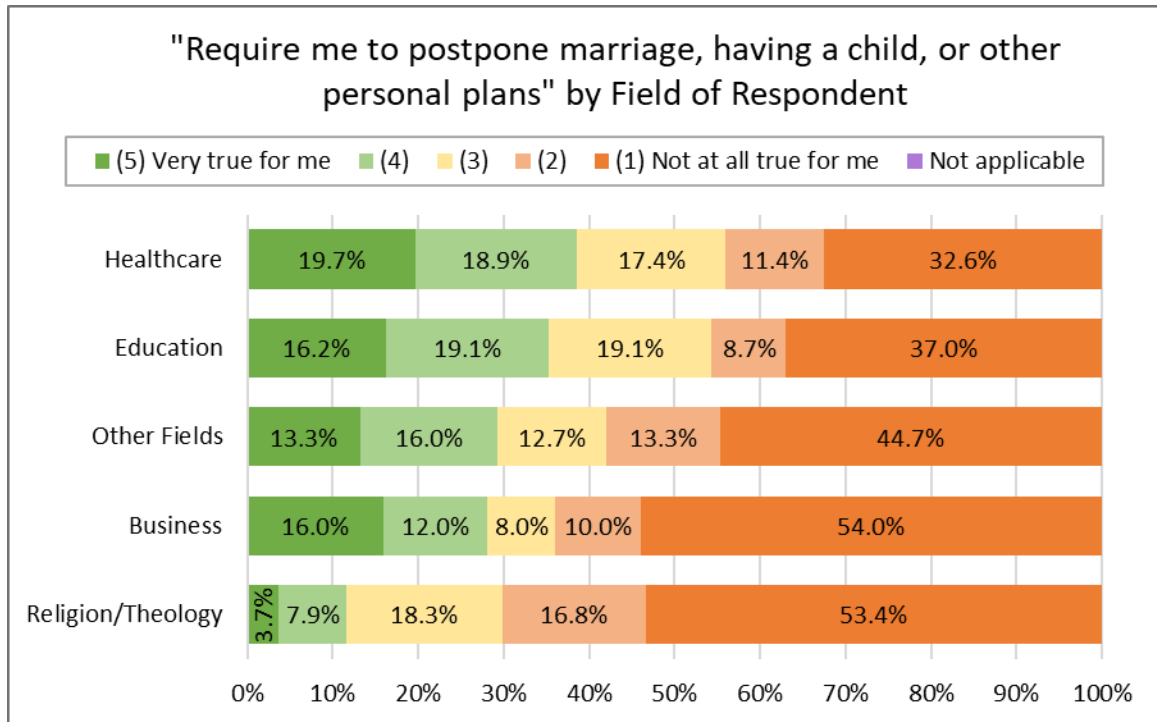


Figure 46. "Require me to postpone marriage, having a child, or other personal plans," by field of respondent.

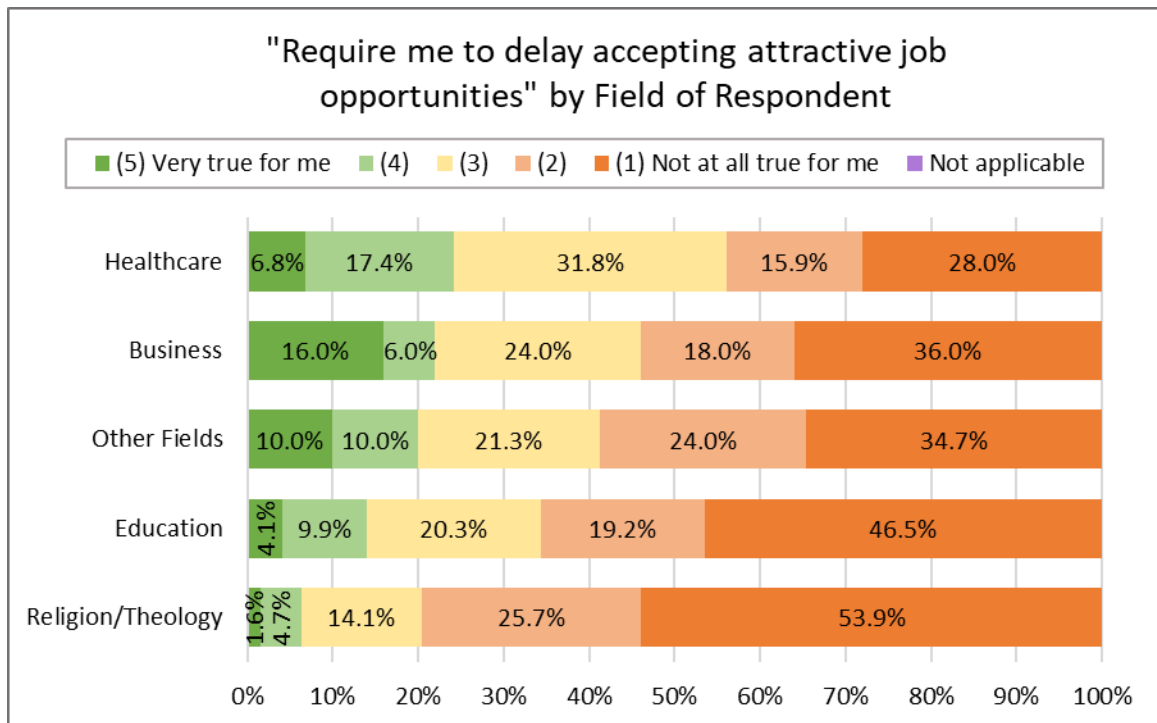


Figure 47. "Require me to delay accepting attractive job opportunities," by field of respondent.

Factors Predicting Pursuit of a Doctoral Degree

The fourth research question asked, “What factors predict interest in pursuing a doctoral degree, especially in the area of Leadership?” To answer this research question the researcher used four dependent variables and ran a series of multiple regressions. The researcher used ordinal regression tests because the dependent variables used 5-point Likert scales. The dependent variables were: a) the level of interest in the “DBA,” b) the level of interest in the “EdD,” c) the level of interest in the “PhD,” d) and the level of interest in “A doctorate in Leadership.” In order to determine which independent variables to place within each regression model, the researcher chose those independent variables that had some theoretical value for being included in each model, and then conducted a series of correlations between the independent and dependent variables. The researcher then chose those independent variables with the highest correlations to the dependent variables, but that also had low correlations with other independent variables in the model, so that each variable provided a unique contribution to the model.

The ordinal regression that best predicted the level of interest in the “DBA” included the following two variables: a) interest in “A doctorate in Leadership,” and b) a doctoral degree will “Allow me to remain marketable (competitive).” Table 11 shows the correlation matrix for this model. The ordinal regression results showed that the model fit was statistically significant ($\chi^2(8, N = 691) = 161.012, p = .000$), and that the model explained 23.7% of the variance in the level of interest in the “DBA” (Nagelkerke $R^2 = .237$). This R^2 value represented a medium effect size (Yockey, 2016). Therefore, the more interest a respondent had in earning “A doctorate in Leadership,” and the higher a respondent indicated that a doctorate would “Allow me to remain marketable

(competitive),” the greater the level of interest a respondent had in earning the “DBA.”

See Appendix B for the Parameter Estimates and the Test of Parallel Lines results for this regression.

Table 11

Correlation Matrix for the “DBA” Multiple Regression Model

		[IntDBA]	[S3aLead]	[S3dMarketable]
How interested are you in	<i>r</i>	1		
earning the "Doctor of	<i>p</i>			
Business Administration	<i>N</i>	747		
(DBA)?" [IntDBA]				
How interested would you	<i>r</i>	.424	1	
be in "A doctorate in	<i>p</i>	.000		
Leadership?" [S3aLead]	<i>N</i>	734	734	
A doctoral degree will	<i>r</i>	.231	.108	1
"Allow me to remain	<i>p</i>	.000	.004	
marketable (competitive)." [S3dMarketable]	<i>N</i>	700	691	700

The ordinal regression that best predicted the level of interest in the “EdD” included the following three variables: a) interest in “A doctorate in Leadership,” b) a doctoral degree will “Allow me to become a professor,” and c) a doctoral degree will “Provide me with opportunities for more challenging/interesting work in the future.” Table 12 shows the correlation matrix for this model. The ordinal regression results showed that the model fit was statistically significant ($\chi^2 (12, N = 689) = 122.093, p =$

.000), and that the model explained 17.3% of the variance in the level of interest in the “EdD” (Nagelkerke $R^2 = .173$). This R^2 value represented a medium effect size (Yockey, 2016).

Table 12

Correlation Matrix for the “EdD” Multiple Regression Model

		[IntEdD]	[S3aLead]	[S3dProf]	[S3dFuture]
How interested are you in	<i>r</i>	1			
earning the "Doctor of	<i>p</i>				
Education (EdD)?"	<i>N</i>	747			
[IntEdD]					
How interested would you	<i>r</i>	.342	1		
be in "A doctorate in	<i>p</i>	.000			
Leadership?" [S3aLead]	<i>N</i>	734	734		
A doctoral degree will	<i>r</i>	.204	.110	1	
"Allow me to become a	<i>p</i>	.000	.004		
professor." [S3dProf]	<i>N</i>	698	689	698	
A doctoral degree will	<i>r</i>	.197	.152	.236	1
"Provide me with	<i>p</i>	.000	.000	.000	
opportunities for more	<i>N</i>	700	691	698	700
challenging/interesting work					
in the future." [S3dFuture]					

Even with a small effect size, this model indicated that the more interest a respondent had in earning “A doctorate in Leadership,” and the higher a respondent indicated that a doctoral degree will “Allow me to become a professor” and “Provide me with opportunities for more challenging/interesting work in the future,” the greater the level of interest a respondent had in earning the “EdD.” See Appendix C for the Parameter Estimates and the Test of Parallel Lines results for this regression.

The ordinal regression that best predicted the level of interest in the “PhD” included the following four variables: a) interest in “A doctorate in Theology/Religion,” b) interest in “A doctorate in Psychology,” c) a doctoral degree will “Allow me to become a professor,” and d) “I would not be willing to devote more than 4 years in pursuit of a doctoral degree.” Table 13 shows the correlation matrix for this model. The ordinal regression results showed that the model fit was statistically significant ($\chi^2 (17, N = 678) = 281.730, p = .000$), and that the model explained 36.4% of the variance in the level of interest in the “PhD” (Nagelkerke $R^2 = .364$). This R^2 value represented a large effect size (Yockey, 2016). This model indicated that the more interest a respondent had in earning “A doctorate in Theology/Religion,” and the more interest a respondent had in earning “A doctorate in Psychology,” and the higher a respondent indicated that a doctoral degree will “Allow me to become a professor,” and the less a respondent indicated “I would not be willing to devote more than 4 years in pursuit of a doctoral degree,” the greater the level of interest a respondent had in earning the “PhD.” See Appendix D for the Parameter Estimates and the Test of Parallel Lines results for this regression.

Table 13

Correlation Matrix for the "PhD" Multiple Regression Model

		[IntPhD]	[S3aTheo]	[S3aPsych]	[S3dProf]	[S3b4years]
How interested are	<i>r</i>	1				
you in earning the	<i>p</i>					
"Doctor of Philosophy	<i>N</i>	747				
(PhD)?" [IntPhD]						
How interested would	<i>r</i>	.462	1			
you be in "A doctorate	<i>p</i>	.000				
in Theology/Religion?"	<i>N</i>	734	734			
[S3aTheo]						
How interested would	<i>r</i>	.309	.167	1		
you be in "A doctorate	<i>p</i>	.000	.000			
in Psychology?"	<i>N</i>	731	726	731		
[S3aPsych]						
A doctoral degree will	<i>r</i>	.256	.152	.057	1	
"Allow me to become a	<i>p</i>	.000	.000	.133		
professor." [S3dProf]	<i>N</i>	698	690	686	698	
"I would not be	<i>r</i>	-.244	-.167	-.123	-.013	1
willing to devote more	<i>p</i>	.000	.000	.001	.726	
than 4 years in pursuit	<i>N</i>	722	713	710	694	722
of a doctoral degree."						
[S3b4years]						

The ordinal regression that best predicted the level of interest in “A doctorate in Leadership” included the following two variables: a) interest in a “DBA,” and b) “I would like to learn more about leadership.” Table 14 shows the correlation matrix for this model. The ordinal regression results showed that the model fit was statistically significant ($\chi^2 (9, N = 716) = 305.025, p = .000$), and that the model explained 36.3% of the variance in the level of interest in “A doctorate in Leadership” (Nagelkerke $R^2 = .363$). This R^2 value represented a large effect size (Yockey, 2016). This model indicated that the more interest a respondent had in earning the “DBA,” and the higher a respondent indicated “I would like to learn more about leadership,” the greater the level of interest a respondent had in earning “A doctorate in Leadership.” See Appendix D for the Parameter Estimates and the Test of Parallel Lines results for this regression.

Table 14

Correlation Matrix for the "A Doctorate in Leadership" Multiple Regression Model

		[S3aLead]	[IntDBA]	[S3bLeadLearn]
How interested would you	<i>r</i>	1		
be in "A doctorate in	<i>p</i>			
Leadership?" [S3aLead]	<i>N</i>	734		
How interested are you in	<i>r</i>	.424	1	
earning the "Doctor of	<i>p</i>	.000		
Business Administration	<i>N</i>	734	747	
(DBA)?" [IntDBA]				
"I would like to learn more	<i>r</i>	.447	.245	1
about leadership)." [S3bLeadLearn]	<i>p</i>	.000	.000	
	<i>N</i>	716	725	725

Conclusions

The data revealed that 20% of the respondents were not interested in any doctoral degree; however, 80% had at least *a little interest* in some type of doctoral degree, while 25% had either a *definite interest* or *very high interest* in at least one of the degrees listed (the DBA, EdD, or PhD). The data also revealed that respondents were generally interested in the degree typically associated with their current field. For example, those in education were typically more interested in the EdD than in other types of degrees, and those in business were typically more interested in the DBA than in other types of degrees.

Some variables have universal importance. More than 8 out of 10 respondents reported that the “availability of scholarships,” the “availability of financial aid,” the “cost of the program,” and a “sense of personal satisfaction and achievement,” were either *definitely important* or *extremely important*. The “ability to continue working full-time” was either *definitely important* or *extremely important* for 75.2% of all respondents. However, the level of importance for other variables depended on the degree, field, or age of the respondent. For example, compared to older individuals, younger individuals were much more likely to *agree* or *strongly agree* with the statements, “I believe a doctoral degree will enhance my career advancement,” and that a doctoral degree will, “Improve my long-term income and financial stability.” Likewise, those in the field of Business were much more likely to report that a doctoral degree would “Help me develop the skills necessary to do my job” as either (5) *very true for me* or (4), compared to those in the field of Education.

It seems that many do not see the benefits of a doctoral degree for their vocation, especially when weighed against the costs. Of those reporting at least *a little interest* in earning any doctoral degree, only 36.7% *agreed* or *strongly agreed* with the statement, “The long-term benefits of a doctoral degree outweigh the costs.” Of those reporting *no interest* in any doctoral degree, 77% *agreed* or *strongly agreed* with the statement, “A doctorate is too costly.”

There was a gap between how important respondents viewed ethics for their vocation and the interest respondents had for learning more about ethics. While more than 80% *strongly agreed* with the statement, “Ethics are important in my vocational field,” only 20% *strongly agreed* with the statement, “I would like to learn more about

ethics. Adding the percentage who *agreed* with each statement did narrow the gap; however, the difference was still more than 20%.

There was not a lot of interest in completing a doctoral degree entirely online. Only 43.4% *agreed* or *strongly agreed* with the statement, “I would prefer to obtain a doctoral degree entirely on-line.” The exceptions were those in the field of Healthcare, where 62.9% *agreed* or *strongly agreed* with the statement. On the other hand, the percentage who thought the availability of online classes was important was high, with 74.2% reporting that “The availability of online classes” was *definitely important* or *extremely important*.

Concerning obstacles to pursuing a doctoral degree, about three out of four respondents reported that financial considerations were an obstacle to pursuing a doctoral degree. More than 78% reported that pursuing a doctoral degree would “Require more money than I have available,” was either (5) *very true for me* or (4), and more than 75% reported that pursuing a doctoral degree would “Require me to take on large financial debts,” was either (5) *very true for me* or (4). These financial hindrances appeared consistently across age, current work situation, current class-load, organizational type, and field.

Potential doctoral students were also concerned about time, but to a lesser degree than about finances. Sixty-three percent of respondents indicated that the statement, pursuing a doctoral degree would “Place undue demands on my time and energy,” was either (5) *very true for me* or (4), and 60% indicated that the statement, pursuing a doctoral degree would “Severely limit the time I have for people who are important to me,” was either (5) *very true for me* or (4). On the other hand, the two statements

(“Require me to postpone marriage, having a child, or other personal plans” and “Require me to delay accepting attractive job opportunities”) with the smallest percentages rated as either (5) *Very true for me* or (4) revealed more variation by age, current class-load, organizational type, and field.

No one or two variables hold the key to predicting who will pursue a doctoral degree and who will not. However, the multiple regression models in this study revealed that higher levels of interest in Leadership led to higher levels of interest in the DBA and EdD degrees. Furthermore, higher levels of interest in becoming a professor led to higher levels of interest in the EdD and PhD degrees.

Implications and Recommendations

This study revealed that about one in four graduate level students had either a *definite interest* or *very high interest* in pursuing a doctoral degree. This is not a large pool of students. The researcher hopes that this study will help universities determine where to place their advertisement and recruitment resources for the greatest impact on enrollment in doctoral programs. The researcher also hopes that the improved use of university resources leads to more students being able to find doctoral programs that meet their needs and preferences.

While there was some interest in the area of Leadership by those in the field of Religion/Theology, potential doctoral students in this field tended to be more interested in the PhD or DMin/DDiv degrees. Therefore, for those in the field of Religion/Theology, advertisement and recruitment resources for an EdD degree in Leadership should focus on pastors of larger churches, those interested in becoming a professor, or those in administrative positions.

Similarly, those in the field of Business who have an interest in a doctoral degree in Leadership lean more toward interest in the DBA degree. If possible, the researcher recommends offering the same program to those in Business, Education, or other fields, while allowing the student to choose which degree he or she will receive—the EdD or the DBA.

Financial considerations are the largest obstacle for most potential doctoral students. Universities must make the total cost of their doctoral programs clear. In addition, universities should place more resources into communicating various ways in which students can finance their doctoral degrees. Universities should also gather information concerning scholarship opportunities. Potential students need this information before they are able to make the decision whether or not to enroll in a doctoral program.

Related to the cost of the doctoral program itself is the fact that most students need to continue working in order to support themselves and their families. In fact, many of the potential doctoral students in this study expected their employers to contribute to their education. Universities should explore the possibilities of partnerships with specific businesses or fields. In order to do this, universities should consider making connections through local chambers of commerce, and surveying specific business sectors concerning their Leadership training needs.

The researcher recommends that future studies include more potential doctoral students from state universities. The small number of students affiliated with state universities in this study limited the researcher's ability to test differences between students in religiously affiliated universities with those in state universities. The

researcher also recommends additional sampling in order to examine the interests of students in fields other than Business, Education, Healthcare, and Religion/Theology.

Finally, the researcher recommends further study in order to examine whether or not the predictors used in the multiple regressions of this study actually lead to higher levels of enrollment in doctoral programs. One would think that a longitudinal research design following a group of graduate students would yield the best results; however, the number of years needed for such a study, and the loss of anonymity for the participants in such a study, make a longitudinal design less than ideal. Therefore, it may be preferable to survey first-year doctoral students, asking them to identify the amount of influence the multiple regression predictors, as well as other variables, had in their decision to enroll in a doctoral program.

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Appendix A

Survey Instrument (with Percentages of Responses to Each Item)

Survey of Interest in Earning a Doctoral Degree

Note: The following logic was not visible to the respondent.

Page exit logic: Skip / Disqualify Logic **IF:** Question "Please check the appropriate consent option:" #1 is one of the following answers ("I do not wish to participate in this study.") **THEN:** Disqualify and display: "Thank you for your consideration. If you change your mind, you may click the link provided in the email you received and start again. You may now close this window or navigate to another page."

Participant Consent

About the study: The purpose of this study is to discover the extent to which master's degree students and recent graduates are interested in earning a doctoral degree. In addition, the study hopes to identify program features that students are looking for, and the obstacles students face in pursuing a doctoral degree.

Discomfort and Risks: This survey is anonymous, and there are no known risks to participants. However, it is not possible to identify all potential risks, but reasonable safeguards have been taken to minimize any risk to you.

Benefits: Your participation will provide educators with information needed to create or change doctoral programs so that these programs better address the interests, needs, and obstacles faced by students interested in pursuing a doctoral degree.

Confidentiality: This survey is anonymous. This is to encourage your honest responses and remove any concern of being identified. The survey instrument was developed using SurveyGizmo.com, where the data will be securely maintained, accessible only to the principle investigator.

Refusal/Withdrawal: You may refuse to participate or withdrawal from the study at any time.

If you have questions or concerns about this study, the principle investigator may be contacted by email at rwhouseal@olivet.edu.

By consenting to participate in this study you give permission for the use and disclosure of the general results for the purposes of this research.

Please check the appropriate consent option:*

☐ I have read the above information and agree to participate in this study.

☐ I do not wish to participate in this study.

Note: The following logic was not visible to the respondent.

Page exit logic: Skip / Disqualify Logic **IF:** Question "Which of the following statements best applies to you?" #2 is one of the following answers ("None of the above apply to me") **THEN:** Disqualify and display: "Thank you for your consideration. This study is only open to master's and doctoral degree students and graduates. Because you answered "None of the above apply to me" you are not eligible to complete this survey. You may now close this window or navigate to another page."

Page exit logic: Skip / Disqualify Logic **IF:** Question "Which of the following statements best applies to you?" #2 is one of the following answers ("I am a student in a Doctoral degree program", "I am a graduate of a Doctoral degree program") **THEN:** Jump to Section 4.

Which of the following statements best applies to you?* n=986; 100.0%

() I am a student in a Master's degree program	n=414; 42.0%
() I am a graduate of a Master's degree program	n=520; 52.7%
() I am a student in a Doctoral degree program	n=35; 3.5%
() I am a graduate of a Doctoral degree program	n=17; 1.7%
() None of the above apply to me	n=0; 0.0%

Section 1

Note: The following logic was not visible to the respondent.

Page exit logic: Skip / Disqualify Logic **IF:** (((((Question "Doctor of Business Administration (DBA)" is one of the following answers ("A Little Interest", "Some Interest", "Definite Interest", "Very High Interest") OR Question "Doctor of Education (Ed.D.)" is one of the following answers ("A Little Interest", "Some Interest", "Definite Interest", "Very High Interest")) OR Question "Doctor of Philosophy (Ph.D.)" is one of the following answers ("A Little Interest", "Some Interest", "Definite Interest", "Very High Interest")) OR Question "Do you have an interest in earning any other type of doctoral degree?" #4 is one of the following answers ("Yes (please write-in)")) OR Question "Do you have an interest in earning any other type of doctoral degree?" #4 Option "Yes (please write-in)") **THEN:** Jump to Section 3a.

How interested are you in earning any of the following types of doctoral degrees? (Please indicate your interest for each degree.)* n=934; 100.0%

	No Interest	A Little Interest	Some Interest	Definite Interest	Very High Interest
Doctor of Business Administration (DBA)	72.3%	11.7%	10.0%	3.2%	2.9%
Doctor of Education (Ed.D.)	49.4%	21.3%	18.8%	7.0%	3.5%
Doctor of Philosophy (Ph.D.)	61.6%	9.9%	13.0%	8.8%	6.9%

Do you have an interest in earning any other type of doctoral degree?* n=934; 100.0%

() No	61.9%
() Yes (please write-in): _____	38.1%

Section 2

Note: The following logic was not visible to the respondent.

Page exit logic: Skip / Disqualify Logic **IF:** Question "A doctorate is unnecessary considering my vocation." is one of the following answers ("Strongly disagree", "Disagree", "Not sure / neutral", "Agree", "Strongly Agree") **THEN:** Jump to Section 5.

You indicated no interest in any of the doctoral degrees listed. Please respond to each of the following statements as to why you have no interest.* *n*=187; 100.0%

	Strongly disagree	Disagree	Not sure / neutral	Agree	Strongly Agree
A doctorate is unnecessary considering my vocation.	5.9%	15.0%	25.1%	37.4%	16.6%
A doctorate is too costly.	3.2%	5.3%	14.4%	47.6%	29.4%
I do not have the motivation necessary to complete a doctoral degree.	9.1%	15.0%	16.6%	36.9%	22.5%
I do not have the time necessary to complete a doctoral degree.	5.3%	9.6%	13.4%	41.2%	30.5%
I do not believe I have the academic ability necessary to complete a doctoral degree.	34.8%	39.0%	13.9%	9.6%	2.7%

Are there other reasons why you have no interest in earning a doctoral degree? *n*=182; 100.0%

☐ No 67.0%

☐ Yes (please describe): _____ 33.0%

Section 3a

How interested would you be in each of the following fields of study? (Please indicate your interest for each field of study.)

	No interest	A little interest	Some interest	Definite interest	Very high interest
A doctorate in Computer Science (n=731)	86.9%	7.5%	3.4%	1.9%	0.3%
A doctorate in Education (n=733)	36.6%	25.9%	22.0%	10.0%	5.6%
A doctorate in History (n=730)	75.3%	12.9%	7.9%	2.9%	1.0%
A doctorate in Leadership (n=734)	29.2%	21.0%	23.8%	16.2%	9.8%
A doctorate in Nursing Practice (n=731)	75.4%	4.2%	4.8%	5.6%	10.0%
A doctorate in Psychology (n=731)	67.6%	12.6%	10.4%	5.7%	3.7%
A doctorate in Theology/Religion (n=734)	54.0%	10.4%	12.5%	14.0%	9.1%

Do you have an interest in some other field of study?

n=711; 100.0%

() No

82.3%

() Yes (please write in area): _____

17.7%

Section 3b

Please reply to the following statements by choosing the response that comes closest to your opinion.

	Strongly disagree	Disagree	Not sure / neutral	Agree	Strongly agree	Not applicable
I plan to enroll in a doctoral program immediately upon graduation. (Choose "Not applicable" if you completed your master's degree more than a year ago.) (n=720)	17.6%	14.2%	22.2%	3.6%	4.3%	38.1%
The state of the economy will influence my decision to seek a doctoral degree. (n=724)	9.4%	18.2%	15.9%	33.6%	21.4%	1.5%
The availability of financial aid will influence my decision to seek a doctoral degree. (n=723)	4.8%	5.7%	9.1%	32.5%	46.9%	1.0%
My master's degree has adequately prepared me to enter a doctoral program. (n=723)	1.0%	3.9%	31.8%	35.8%	23.2%	4.3%
The long-term benefits of a doctoral degree outweigh the costs. (n=723)	3.5%	14.2%	45.2%	26.0%	10.7%	0.4%
I would prefer to obtain a doctoral degree entirely on-line. (n=722)	10.9%	19.1%	25.9%	19.7%	23.7%	0.7%
Obtaining a doctoral degree at the same school from which I received my graduate degree is a good idea. (n=724)	4.0%	19.3%	39.5%	20.7%	15.1%	1.4%

It would be better to obtain a doctoral degree from a school other than my graduate alma mater. (n=724)	3.9%	17.7%	46.0%	20.9%	10.5%	1.1%
A doctoral degree from a state university would be better than one from a religiously affiliated university. (n=723)	13.4%	43.8%	34.4%	6.4%	1.8%	0.1%
I would not be willing to devote more than 4 years in pursuit of a doctoral degree. (n=722)	3.7%	15.0%	19.7%	34.2%	26.7%	0.7%

Please reply to the following statements about employment and education by choosing the response that comes closest to your opinion.

	Strongly disagree	Disagree	Not sure / neutral	Agree	Strongly agree	Not applicable
I would prefer to be a full-time doctoral student. (n=724)	14.4%	38.1%	22.9%	17.5%	6.6%	0.4%
I would prefer to be working a full-time job while earning a doctoral degree. (n=723)	4.0%	12.2%	11.3%	37.3%	34.7%	0.4%
Gaining work experience before entering a doctoral program would be best. (n=721)	0.6%	5.8%	15.0%	46.6%	28.3%	3.7%
I believe a doctoral degree will enhance my career advancement. (n=720)	2.2%	8.5%	22.6%	38.2%	27.4%	1.1%
I would pursue a doctoral degree if my employer suggested it. (n=718)	1.7%	6.3%	25.3%	46.5%	19.2%	1.0%

If my employer encourages me to pursue a doctoral degree, I would expect financial assistance from the organization. (n=719)	0.3%	2.6%	9.3%	47.7%	38.8%	1.3%
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Please reply to the following statements about ethics and leadership by choosing the response that comes closest to your opinion.

	Strongly disagree	Disagree	Not sure / neutral	Agree	Strongly agree	Not applicable
Ethics are important in my vocational field. (n=723)	0.4%	0.3%	1.2%	16.9%	80.8%	0.4%
I would like to learn more about ethics. (n=725)	0.7%	6.9%	17.2%	53.9%	20.1%	1.1%
I have a good understanding of my leadership style. (n=725)	0.4%	2.9%	9.5%	57.9%	29.1%	0.1%
I would like to learn more about leadership. (n=725)	1.2%	3.2%	13.2%	51.4%	30.5%	0.4%
I consider myself to be a leader. (n=725)	0.7%	1.4%	7.2%	49.9%	40.7%	0.1%

Section 3c

How important are the following features for you in pursuing a doctoral degree?

	Not important	A little important	Somewhat important	Definitely important	Extremely important
The reputation of the university (<i>n</i> =708)	0.8%	1.4%	17.9%	54.5%	25.3%
The reputation of the faculty (<i>n</i> =706)	0.7%	2.7%	16.6%	54.2%	25.8%
Faculty-to-student relationships (<i>n</i> =706)	0.6%	2.3%	17.0%	51.6%	28.6%
Student-to-student relationships (<i>n</i> =707)	4.4%	13.3%	38.3%	32.7%	11.3%
Location of the university/classes (<i>n</i> =709)	3.1%	3.9%	22.0%	44.0%	26.9%
The availability of weekend classes (<i>n</i> =709)	13.7%	14.8%	30.0%	27.5%	14.0%
The availability of evening classes (<i>n</i> =708)	6.5%	9.5%	25.4%	39.4%	19.2%
The availability of online classes (<i>n</i> =708)	4.7%	6.5%	14.7%	33.5%	40.7%
A cohort model (<i>n</i> =707)	8.1%	9.5%	37.8%	30.3%	14.4%
Practice-oriented education (<i>n</i> =707)	2.4%	5.4%	22.8%	48.1%	21.4%
A specific research/dissertation area (<i>n</i> =708)	4.0%	8.5%	32.2%	41.4%	14.0%
Completing the doctoral degree in 3 years (<i>n</i> =708)	6.2%	8.2%	28.4%	36.0%	21.2%

How important are the following considerations for you in pursuing a doctoral degree?

	Not important	A little important	Somewhat important	Definitely important	Extremely important
Attending a state university (<i>n</i> =709)	55.6%	18.5%	20.7%	3.5%	1.7%
Attending a private university (<i>n</i> =708)	49.3%	15.4%	26.1%	7.6%	1.6%
Attending a religiously affiliated university (<i>n</i> =707)	33.2%	15.4%	23.9%	20.7%	6.8%
Being able to work full-time (<i>n</i> =708)	3.4%	6.6%	14.8%	39.7%	35.5%
Employment opportunities for my spouse (<i>n</i> =707)	39.2%	7.1%	16.8%	25.5%	11.5%
Financial cost of the program (<i>n</i> =707)	0.4%	0.8%	8.2%	35.9%	54.6%
Availability of scholarships, grants or other financial aid (<i>n</i> =707)	0.7%	0.8%	7.5%	35.0%	55.9%
Availability of employer financial support (<i>n</i> =706)	4.2%	5.0%	23.4%	32.2%	35.3%

Section 3d

The following are some *reasons* people have for pursuing a doctoral degree. Please indicate how true each statement is for you.

A doctoral degree will:

	Not at all true for me (1)	(2)	(3)	(4)	Very true for me (5)
Provide me with opportunities for more challenging/interesting work in the future. (n=700)	4.4%	7.1%	22.6%	33.7%	32.1%
Give me a sense of personal satisfaction and achievement. (n=700)	0.9%	3.9%	14.0%	31.0%	50.3%
Allow me to become a professor. (n=698)	11.7%	10.7%	25.2%	27.7%	24.6%
Allow me to obtain the professional credentials I need for advancement. (n=700)	9.1%	14.3%	24.3%	26.1%	26.1%
Help me get the respect I deserve at work. (n=698)	30.4%	22.1%	21.3%	15.2%	11.0%
Allow me to transition from my current career path to a new one. (n=700)	20.9%	15.7%	24.3%	19.3%	19.9%
Allow me to change my occupational area. (n=699)	30.6%	18.6%	23.6%	15.9%	11.3%
Provide me with the right connections to get a good job in the future. (n=699)	15.0%	18.2%	27.9%	22.6%	16.3%
Help me develop the skills necessary to do my job. (n=700)	7.7%	12.1%	21.7%	32.3%	26.1%
Allow me to remain marketable (competitive). (n=700)	8.3%	9.6%	20.7%	32.7%	28.7%
Improve my long term income and financial stability. (n=699)	9.0%	11.4%	18.3%	27.6%	33.6%

In addition to the reasons just listed, do you have other reasons for pursuing a doctoral degree?

() No n=658; 100.0%
 () Yes (please describe): _____ 85.6%
14.4%

Section 3e

Page exit logic: Skip / Disqualify Logic **IF:** Question "Which of the following statements best applies to you?" #2 is not one of the following answers ("I am a student in a Doctoral degree program", "I am a graduate of a Doctoral degree program") **THEN:** Jump to page 11 - Section 5

The following are some *reservations* people have about pursuing a doctoral degree. Please indicate how true each statement is for you.

A doctoral degree program will:

	Not at all true for me (1)	(2)	(3)	(4)	Very true for me (5)
Place undue demands on my time and energy. (n=697)	4.9%	9.3%	22.8%	31.9%	31.1%
Require me to postpone marriage, having a child, or other personal plans. (n=698)	43.6%	12.5%	16.5%	14.8%	12.8%
Severely limit the time I have for people who are important to me. (n=697)	6.2%	13.3%	20.5%	31.7%	28.3%
Require more money than I have available. (n=696)	2.2%	5.2%	14.2%	30.5%	48.0%
Require me to take on large financial debts. (n=696)	4.6%	5.7%	14.1%	26.0%	49.6%
Require me to delay accepting attractive job opportunities. (n=697)	41.8%	21.2%	21.2%	9.6%	6.2%

In addition to the reservations just listed, do you have other reservations about pursuing a doctoral degree?

() No n=644; 100.0%
86.5%
 () Yes (please describe): _____ 13.5%

Section 4

You indicated that you are already in a doctoral program, or a graduate of a doctoral program. As briefly as possible, please describe the most important reasons for selecting the program you chose.

Section 5

What is your age?	<i>n</i> =882; 100.0%
<input type="checkbox"/> Under 25	5.1%
<input type="checkbox"/> 25 to 29	23.1%
<input type="checkbox"/> 30 to 39	32.8%
<input type="checkbox"/> 40 to 49	19.8%
<input type="checkbox"/> 50 or over	19.2%
Which best describes your current work situation?	<i>n</i> =880; 100.0%
<input type="checkbox"/> Not currently working	3.8%
<input type="checkbox"/> Working part-time	13.1%
<input type="checkbox"/> Working full-time	83.2%
Which best describes your current class-load?	<i>n</i> =883; 100.0%
<input type="checkbox"/> Not currently taking classes	50.8%
<input type="checkbox"/> Taking classes part-time	19.5%
<input type="checkbox"/> Taking classes full-time	29.7%
Which best describes your current field?	<i>n</i> =882; 100.0%
<input type="checkbox"/> Business	6.8%
<input type="checkbox"/> Communications	0.3%
<input type="checkbox"/> Counseling	2.9%
<input type="checkbox"/> Criminology	0.1%
<input type="checkbox"/> Education	24.3%
<input type="checkbox"/> Engineering	0.3%
<input type="checkbox"/> English/Speech/Writing	0.5%
<input type="checkbox"/> Fine Arts	0.1%
<input type="checkbox"/> Healthcare	22.9%
<input type="checkbox"/> History	0.2%
<input type="checkbox"/> Human Resources	0.3%
<input type="checkbox"/> Leadership	3.1%
<input type="checkbox"/> Psychology	1.5%
<input type="checkbox"/> Public Administration/Government	0.5%
<input type="checkbox"/> Religion/Theology	25.9%
<input type="checkbox"/> Science/Technology	1.0%
<input type="checkbox"/> Social Work	0.2%
<input type="checkbox"/> Sociology	0.0%
<input type="checkbox"/> Other (please write in): _____	9.1%

Which university/organization are you associated with (or sent you this survey)?

	<i>n</i> =881; 100.0%
() Avila University	4.1%
() Baker University	0.0%
() Church of the Nazarene	18.7%
() MidAmerica Nazarene University	5.8%
() Midwestern Baptist Theological Seminary	0.0%
() Nazarene Theological Seminary	7.6%
() Olivet Nazarene University	57.0%
() Penn State University	4.8%
() Rockhurst University	0.0%
() Other - Write In: _____	2.0%

Thank You!

Thank you for completing this survey!

If you would like a chance to receive one of the three \$100 Amazon eGift cards, please click on the following link and provide your first name and email address. Your contact information will only be used to email your eGift Card should you be selected to receive one. Your name or email will never be linked to your survey responses. Amazon eGift Card Entry

If you are not interested in a chance to receive one of the Amazon eGift Cards, you may close this window or navigate to another web site.

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Appendix B

Ordinal Multiple Regression Table for the Level of Interest in the DBA

Table B1

Ordinal Regression for the Level of Interest in the DBA

		Estimate	Std.	Wald	df	p
Threshold	[IntDBA = 1]	-0.368	0.164	5.057	1	.025
	[IntDBA = 2]	0.336	0.168	3.999	1	.046
	[IntDBA = 3]	1.468	0.199	54.221	1	.000
	[IntDBA = 4]	2.246	0.247	82.519	1	.000
Location	[S3aLead = 1]	-2.393	0.278	73.984	1	.000
	[S3aLead = 2]	-1.072	0.215	24.883	1	.000
	[S3aLead = 3]	-0.828	0.196	17.844	1	.000
	[S3aLead = 4]	-0.187	0.192	0.948	1	.330
	[S3aLead = 5]	0	.	.	0	
	[S3dMarketable = 1]	-1.348	0.366	13.590	1	.000
	[S3dMarketable = 2]	-0.896	0.305	8.648	1	.003
	[S3dMarketable = 3]	-0.578	0.198	8.555	1	.003
	[S3dMarketable = 4]	-0.106	0.151	0.491	1	.483
	[S3dMarketable = 5]	0	.	.	0	

R^2 (Nagelkerke) = .237

Model Fit: χ^2 (8, $N = 691$) = 161.012, $p = .000$

Test of Parallel Lines: χ^2 (24, $N = 691$) = 15.054, $p = .919$

Appendix C

Ordinal Multiple Regression Table for the Level of Interest in the EdD

Table C1

Ordinal Regression for the Level of Interest in the EdD

		Estimate	Std. Error	Wald	df	p
Threshold	[IntEdD = 1]	-0.368	0.164	5.057	1	.025
	[IntEdD = 2]	0.336	0.168	3.999	1	.046
	[IntEdD = 3]	1.468	0.199	54.221	1	.000
	[IntEdD = 4]	2.246	0.247	82.519	1	.000
Location	[S3aLead = 1]	-2.393	0.278	73.984	1	.000
	[S3aLead = 2]	-1.072	0.215	24.883	1	.000
	[S3aLead = 3]	-0.828	0.196	17.844	1	.000
	[S3aLead = 4]	-0.187	0.192	0.948	1	.330
	[S3aLead = 5]	0	.	.	0	
	[S3dProf = 1]	-1.348	0.366	13.590	1	.000
	[S3dProf = 2]	-0.896	0.305	8.648	1	.003
	[S3dProf = 3]	-0.578	0.198	8.555	1	.003
	[S3dProf = 4]	-0.106	0.151	0.491	1	.483
	[S3dProf = 5]	0	.	.	0	
	[S3dFuture = 1]	-1.207	0.41	8.667	1	0.003
	[S3dFuture = 2]	-0.602	0.312	3.726	1	0.054
	[S3dFuture = 3]	-0.29	0.205	1.996	1	0.158
	[S3dFuture = 4]	-0.071	0.18	0.157	1	0.692
	[S3dFuture = 5]	0	.	.	0	.

Note. R^2 (Nagelkerke) = .137

Model Fit: χ^2 (12, $N = 689$) = 122.093, $p = .000$

Test of Parallel Lines: χ^2 (36, $N = 689$) = 122.956, $p = .000$

Appendix D

Ordinal Multiple Regression Table for the Level of Interest in the PhD

Table D1

Ordinal Regression for the Level of Interest in the PhD

		Estimate	Std. Error	Wald	df	p
Threshold	[IntPhD = 1]	-0.368	0.164	5.057	1	.025
	[IntPhD = 2]	0.336	0.168	3.999	1	.046
	[IntPhD = 3]	1.468	0.199	54.221	1	.000
	[IntPhD = 4]	2.246	0.247	82.519	1	.000
Location	[S3aTheo = 1]	-2.393	0.278	73.984	1	.000
	[S3aTheo = 2]	-1.072	0.215	24.883	1	.000
	[S3aTheo = 3]	-0.828	0.196	17.844	1	.000
	[S3aTheo = 4]	-0.187	0.192	0.948	1	.330
	[S3aTheo = 5]	0	.	.	0	
	[S3aPsych = 1]	-1.348	0.366	13.590	1	.000
	[S3aPsych = 2]	-0.896	0.305	8.648	1	.003
	[S3aPsych = 3]	-0.578	0.198	8.555	1	.003
	[S3aPsych = 4]	-0.106	0.151	0.491	1	.483
	[S3aPsych = 5]	0	.	.	0	
	[S3dProf = 1]	-1.207	0.41	8.667	1	.003
	[S3dProf = 2]	-0.602	0.312	3.726	1	.054
	[S3dProf = 3]	-0.29	0.205	1.996	1	.158
	[S3dProf = 4]	-0.071	0.18	0.157	1	.692
	[S3dProf = 5]	0	.	.	0	
	[S3b4years = 0]	0.274	1.147	0.057	1	.811
	[S3b4years = 1]	1.76	0.42	17.541	1	.000
	[S3b4years = 2]	0.722	0.247	8.531	1	.003
	[S3b4years = 3]	0.395	0.235	2.81	1	.094
	[S3b4years = 4]	-0.14	0.213	0.435	1	.509
	[S3b4years = 5]	0	.	.	0	

Note. R^2 (Nagelkerke) = .364

Model Fit: χ^2 (17, $N = 678$) = 281.173, $p = .000$

Test of Parallel Lines: χ^2 (51, $N = 678$) = 66.814, $p = .068$

Appendix E

Ordinal Multiple Regression Table for the Level of Interest in a Doctorate in Leadership

Table E1

Ordinal Regression for the Level of Interest in a Doctorate in Leadership

		Estimate	Std.	Wald	df	p
Threshold	[S3aLead = 1]	-4.415	0.425	107.732	1	.000
	[S3aLead = 2]	-3.24	0.417	60.356	1	.000
	[S3aLead = 3]	-1.819	0.406	20.078	1	.000
	[S3aLead = 4]	-0.273	0.395	0.478	1	.489
Location	[IntDBA = 1]	-2.349	0.419	31.386	1	.000
	[IntDBA = 2]	-1.491	0.440	11.451	1	.001
	[IntDBA = 3]	-1.035	0.444	5.446	1	.020
	[IntDBA = 4]	-0.031	0.530	0.003	1	.954
	[IntDBA = 5]	0	.	.	0	
	[S3bLeadLearn = 0]	-2.499	1.156	4.673	1	.031
	[S3bLeadLearn = 1]	-2.506	0.672	13.913	1	.000
	[S3bLeadLearn = 2]	-4.303	0.757	32.304	1	.000
	[S3bLeadLearn = 3]	-2.436	0.249	96.02	1	.000
	[S3bLeadLearn = 4]	-1.549	0.168	85.415	1	.000
	[S3bLeadLearn = 5]	0	.	.	0	

Note. R^2 (Nagelkerke) = .363

Model Fit: χ^2 (9, $N = 716$) = 305.025, $p = .000$

Test of Parallel Lines: χ^2 (27, $N = 716$) = 95.674, $p = .000$